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ABSTRACT

A project examined effective methods of delivering education and training to the residents of rural Australia through a literature review and five interview case studies of formal and nonformal training. Findings with regard to access were as follows: potential participants must be aware that the program exists and is for them; the program must be affordable and be delivered at a suitable time and place; and the knowledge and skills of potential participants must be considered in program design and participant selection. Findings in relation to delivery methods and program content emphasized relevant content, target group involvement in decision making, and learner-centered, flexible delivery. Findings related to program outcomes indicated the following: self-confidence as a learner was a critical factor in retention and success; programs that encouraged and enabled interaction between participants and expert facilitators were particularly effective in bringing about attitude change and developing confidence to implement changes. Cost effectiveness was determined by the cost of training delivery and training effectiveness for all stakeholders. (A section describes the five case study courses: whole farm planning, dairy farm management, farm best practice, certificate in food processing, and fish farm attendant. Each case study provides background information, methodology for collecting data, and evaluation of program effectiveness under the headings: access, delivery, changes, and results of changes. Appendixes contain 173 references and the instruments.) (YLB)

ED 407 504

Effective Delivery Methodologies for Education and Training to Rural Australia

Report to the Tasmanian Rural Industry Training Board

Author:
Sue Kilpatrick

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EXECUTIVE SUMMARY

The benefits of education and training accrue to individuals, businesses and the community as a whole. This study follows from a recent report, *Change, Training and Farm Profitability* (Kilpatrick, 1996a), which identified benefits from formal and non-formal education and training for one of those three groups: rural businesses. The report found that farm business managers benefited from education and training through a greater likelihood of making successful changes in their businesses. These successful changes resulted in superior profitability.

Participation in post-compulsory education and training in rural Australia is lower than in urban Australia. Rural Australians face structural and attitudinal barriers in accessing education and training. Structural barriers include location, timing, cost (including cost of travel), entry requirements, lack of relevant training opportunities and inappropriate teaching methods for adults. Attitudinal barriers include lack of confidence as a learner, fear of educational institutions and courses that are perceived not meet needs.

Relatively low participation in education and training, combined with the knowledge that education and training brings benefits, raises the question of how best to deliver education and training to rural Australia. Effective delivery should encourage participation, be cost effective and also result in positive outcomes for individuals, businesses and consequently for rural society.

The following five criteria have been used to assess effective methods of delivering education and training to the residents of rural Australia:

1. The education and training must be accessible to the target group.
2. Delivery costs and resource requirements should be acceptable to funding bodies and participants.
3. The education and training must achieve satisfactory learning outcomes in terms of knowledge, skills and attitudes acquired.
4. Participants' post-education and training work practices or other behaviour should reflect the education and training.
5. Education-and-training-influenced behavioural or practice changes should have positive results for the participants and/or the wider community, for example, the participants' business, organisation, industry, family and/or community should benefit.

Interaction is a key feature of effective education and training identified in the report. Interaction between participants and with 'expert' trainers or facilitators assists with learning and also builds information and support networks which function long after the training program ceases.

The recommendations of this report follow from and extensive literature review supplemented by five interview case studies of formal and non-formal training delivered in a range of formats. The case studies were an Australian Qualifications Framework Certificate 1 for long-term unemployed, a TAFE

Certificate course for women farmers, a traineeship in the aquaculture industry, a non-accredited farm planning course, and an non-formal discussion group program.

A framework for measuring program cost effectiveness is developed in Chapter 6. The Cost Effectiveness Grid allows separate consideration of the costs and outcomes of a program for two groups: (i) program participants and (ii) program providers and other stakeholders such as funding bodies, the community and industry organisations. The Cost Effectiveness Grid is trialed on each of the five case study programs.

The findings and recommendations of this report are compatible with the findings of the National Flexible Delivery Taskforce and the principles of flexible delivery endorsed by the ministerial council responsibile for vocational education and training at the national level (MINCO) in November 1996.

KEY FINDINGS

Access

Program participants consult multiple information sources before joining or enrolling in a program. Sources consulted usually include at least two of: the media, past program participants, employers and the program provider.

Local training co-ordinators can facilitate small business and rural industry access to appropriate and relevant training.

The indirect costs of education and training, including travel and income foregone, are barriers to participation for rural Australians, however, people are prepared to pay for education and training which they perceive as highly valuable. Small businesses consider the cost of education and training in relation to the cost of other ways of obtaining skills and information, such as from consultants.

Delivery methods which facilitate peer interaction are attractive to those already in the workforce. Consultation in the choice of time and location of training and provision of child care enhances access to education and training.

Recognition of prior learning and articulated training pathways facilitate access to education and training for rural Australians.

Delivery methods and program content

The features of effective training are:

1. Interactive training, with opportunities for discussion and interaction with both fellow participants and 'experts'
2. Relevant topics, applicable to target group's situation
3. Credible facilitators/instructors and materials
4. Groups of people who regard each other as similar, and are comfortable with each other
5. Reduction or removal of barriers such as child care and travel
6. Sessions times and venues to suit target group's work and personal lives
7. Short sessions
8. Value for money
9. Programs that can be taken in manageable chunks
10. Marketing through associations, community groups and organisations.

These features will also encourage participation.

Program outcomes

Self-confidence as a learner is a critical factor in the retention and success of participants in education and training.

Programs which encourage and facilitate interaction between participants and with 'expert' facilitators are particularly effective in bringing about attitude change, developing confidence to implement changes to practice and establishing learning and support networks which continue to function long after the training program is finished.

Active employer involvement in developing a training program contributes not only to the success of the program, but also to the match between knowledge, skills and attitudes of employees (or prospective employees) and those required by the employer.

Effective education and training encourages participants to seek further education and training by developing and reinforcing their confidence as learners.

Cost effectiveness

Cost effectiveness is determined by the *cost* of training delivery and by the *effectiveness* of that training, which depends on the outcomes of the training. Outcomes can accrue to individuals, businesses, communities and society as a whole.

The cost effectiveness of a training program is difficult to measure in monetary terms because many of the costs and benefits are non-monetary and benefits may only be apparent over a long period of time, for example improvements in environmental sustainability flowing from a training program for farmers.

Often, different costs and outcomes apply to different stakeholders in the program (participants, funding bodies, employers, training providers). The delivery mode and treatment of fixed costs of delivery (for example, buildings, material development costs) affect measured costs.

This report suggests a framework for evaluating the effectiveness of training programs by first partitioning stakeholders into for two groups:

- program participants, and
- program providers, funding bodies and other stakeholders.

For each group, the costs and the outcomes or benefits of the programs are considered. Costs for participants are expanded to include all barriers to accessing the program.

Programs are placed on a grid according to how they rate in terms of outcomes and costs. The axes for participants are outcomes of training and barriers to accessing training and the axes for providers, funding bodies and other stakeholders are cost of provision and outcomes.

RECOMMENDATIONS

1. Ten features of effective training should be incorporated into all training programs. These features will also encourage participation in training.

The features are:

1. Interactive training, with opportunities for discussion and interaction with both fellow participants and 'experts'
2. Relevant topics, applicable to target group's situation
3. Credible facilitators/instructors and materials
4. Groups of people who regard each other as similar, and are comfortable with each other
5. Reduction or removal of barriers such as child care and travel
6. Sessions times and venues to suit target group's work and personal lives
7. Short sessions
8. Value for money
9. Programs that can be taken in manageable chunks
10. Marketing through associations, community groups and organisations.

2. Fostering of interaction between participants and with 'expert' facilitators should be an integral part of program design and delivery.

Participant-participant and participant-expert interaction during training builds information and support networks which function long after the training program ceases.

Participants learn from each other as well as from trainers or facilitators. The opportunity to learn from others in the program is a reason for participating in training for many members of the existing workforce.

Participant interaction during training programs also assists learning by allowing participants to test their attitudes and values relating to the new knowledge and skills presented during the program. Participant interaction fosters a change of attitudes toward new behaviours and practices and so increases the effectiveness of the training in changing behaviour and practices.

3. There is no one best way of delivering education and training for rural Australia. A variety of delivery methods and training programs should be available to meet the needs of different individuals and groups.

Accredited training which leads to a qualification is important, especially for new entrants to the workforce. There is a role for discussion groups, workshops and non-accredited courses in upskilling the existing workforce. Non-formal training and informal learning experiences are more attractive to the large group who feel intimidated by the formal training system of TAFE Institutes and universities.

x

4. The greater costs of delivering education and training to rural Australia should be acknowledged and addressed in government policy relating to access and equity in education and training.

Most of the addidtional costs are related to the small numbers of students wanting a given training program in any one rural location, and the difficulty in justifying provision of face-to-face delivery for very small classes. Many of the alternatives to traditional face-to-face provision require expensive technology (for example, interactive satellites) or involve travelling by teaching staff.

There are two direct cost-related consequences of small rural student numbers: one is that the training programs which are delivered in rural locations tend to have a higher cost per student than similar programs delivered in urban locations; and the other is that students who do participate in training which is not offered in their own locality incur costs associated with travel, accommodation and time away from their job which are not incurred by their urban counterparts.

This recommendation is compatible with two of the principles of flexible delivery endorsed by MINCO: improving access for all clients and employing appropriate and effective uses of technology.

5. Training providers and other stakeholders should combine to use facilities and expertise available in rural areas as flexibly and creatively as possible.

The Fish Farm Traineeship provides a model for the effective use of limited and expensive resources in rural areas.

This recommendation is compatible with one of the principles of flexible delivery endorsed by MINCO: developing and adopting efficient and equitable resource allocation models.

6. High quality flexible delivery materials should be developed for delivery in any rural location where there is a demand, and a national register of these training course materials and their providers be established.

This will spread the fixed costs of development over a larger number of training hours. Provision should be made for adaption of materials to suit local conditions. This could occur, for example, in any face-to-face component of the training.

The national register will avoid duplication of effort by acting as a resource for those seeking to develop new programs. The register should also encourage modification of existing programs and other resources, especially flexible delivery

materials, in preference to developing new ones. Suitable arrangements for sharing costs should be negotiated.

This recommendation is compatible with one of the principles of flexible delivery endorsed by MINCO: facilitating an effective training market.

7. Local education and training committees should be established to facilitate provision of formal and non-formal post-secondary education and training in rural Australia.

The committees should have representatives of local industry, small business, including farmers, members of the community, and education and training providers active in the area. The local committees should be supplemented by a network of small business training co-ordinators, each responsible for identifying and meeting the training needs of a group of small businesses.

This recommendation is compatible with one of the principles of flexible delivery endorsed by MINCO: developing effective client/provider relationships.

CHAPTER ONE
INTRODUCTION

Over one third of Australia's population lives outside our capital cities in non-metropolitan Australia. These rural and regional Australians make a substantial contribution to our economy. Some of our major industries, including agriculture, mining, forestry and tourism, generate all or most of their economic activity outside metropolitan areas. The fortunes of Australia's rural exporters have a substantial impact on the Australian economy; a recent estimate is that at least two-thirds of our exports are generated outside capital cities (Liberal Party and National Party, 1996), with agriculture alone contributing 29% of merchandise exports in 1994-95 (Martin, 1996). It is therefore essential for both the rural Australia and the economy as a whole that rural Australians have a high level of skills.

Civilian population as at July 1996

Source: Australian Bureau of Statistics (1996) *Labour Force Australia*, Table 10, Civilian Population by Region.

Education and training in rural Australia

Impact of education and training on rural business

The benefits of education and training accrue to individuals, businesses and the community as a whole. This study follows from a recent report, *Change, Training and Farm Profitability* (Kilpatrick, 1996a), which identified benefits from formal and non-formal education and training for one of those three groups: rural businesses. The report found that farm businesses benefited from participation in education and training by way of a greater likelihood of making successful changes in their businesses. These successful changes resulted in superior profitability.

Kilpatrick (1996a) identified three ways in which the literature suggests that education and training improves business outcomes. First, via improved quality

of labour (Welch, 1970). Second, via better decision making because of improved ability to receive and process information, select inputs and allocate inputs across competing uses (Thomas, Ladewig & McIntosh, 1990; Welch, 1970; Nelson & Phelps, 1966). Third, education alters values and attitudes away from the traditional. This change away from traditional values and attitudes encourages economic development across the economy (Phillips, 1994; Lockheed, Jamison & Lau, 1980).

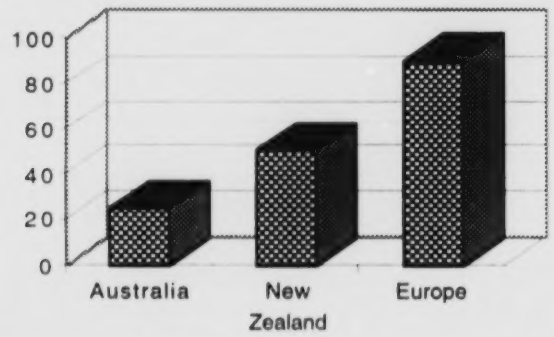
Participation in education and training

Rural participation in post-compulsory education and training is lower than urban participation. Several reports have identified this as both an equity issue and an economic issue; three such reports are National Board of Employment, Education and Training (1991), Department of Primary Industries and Energy (1988) and Clarke (1987). There is also evidence that rural Australians are less educated than their overseas counterparts. For example, the farm workforce is less well qualified than that of its overseas competitors.

Overseas competitors

Only 25% of the Australian farm workforce had school leaving, trade or higher qualifications in 1992, compared to 50% in New Zealand and up to 90% in Europe, countries which are some of our major competitors in global agricultural markets. Chudleigh (1991) estimates that only 11.7% of new entrants to Australian agriculture per year have tertiary agricultural education, and only 4.7% have farm management training.

Percentage of farm workforce with school leaving or higher qualifications, 1993



Source: Cameron & Chamala (1993)

Other Australian industry sectors

Australian Bureau of Statistics (1994) reports that 23.6% of employees in the predominantly rural agriculture, forestry, fishing and hunting industry group had post-school qualifications compared to 47.8% of all Australian employees.

Training activity in Australia is measured by the Australian Bureau of Statistics' *Employer Training Expenditure, Australia* (1994) which measured training

expenditure and activity over a six month period in 1993. Training includes on-the-job training.

On an industry basis, 79.7% of employees in the agriculture, forestry, fishing and hunting industry group received some training in the six month period (the lowest of any industry group), compared to 85.8% of all employees, including 80.1% in manufacturing and 84.8% in construction. The same trend is evident for external training, where 7.2% of employees took a training course in the agriculture, forestry, fishing and hunting industry group, compared to 11.8% overall.

Barriers to participation in training for rural Australians

Barriers to participation in training for rural Australians are structural and attitudinal according to Kelly (1994). Structural barriers include location, timing, entry requirements and inappropriate teaching methods for adults. Attitudinal barriers include lack of confidence as a learner, fear of educational institutions, courses that are perceived not meet needs and, for some women, a perception that training is male dominated. Kilpatrick (1996a) identified four factors which affect participation in training:

> (i) Farm businesses most likely to participate in training are large (measured by value of assets), more profitable, have some debt, have more educated managers and have more than one person in the management team.
>
> (ii) A low level of education in the farm business management team inhibits participation in formal and non-formal training.
>
> (iii) Seasonal and day-to-day on-farm commitments are the main reasons given for not participating in training.
>
> (iv) Effective training is relevant, non-threatening and directly applicable to the farmer's situation. Training in small groups with the opportunity for interaction with the facilitator/instructor and with fellow participants appears to be effective, however, there is no one best way of delivering education and training. A variety of delivery methods and training programs should be available.

National Board of Employment, Education and Training (1991) argues that lack of access to appropriate, relevant, quality education and training opportunities is the major reason for low rural participation in education and training. It identifies locational and consequent financial barriers to access. Commonwealth Tertiary Education Commission and Department of Primary Industries and Energy (1987) identifies low rural incomes and the high cost of education and related expenses, lack of information about suitable courses and inadequate provision of education and training in rural areas as barriers to participation. Clarke (1987) identifies lack of suitable port-secondary education opportunities in rural areas, lack of information about educational opportunities and the relatively high cost of

participation in post-secondary education for rural Australians as barriers to participation in post-secondary education. Rodwell *et. al.* (1996) found that barriers to access for students from remote Aboriginal communities included cultural barriers associated with staying in towns while attending education and training.

What is effective delivery?

Examination of the literature suggests that effective education and training delivery must fulfil five criteria:

1. It must make the training accessible to the target group.
2. Delivery costs and resource requirements should be acceptable to funding bodies and participants.
3. It must achieve satisfactory learning outcomes in terms of knowledge, skills and attitudes acquired.
4. Participants' post-education and training work practices or other behaviour should reflect the education and training.
5. The behavioural or practice changes should have positive results for the participants and/or the wider community, for example, the participants' business, organisation, industry, family and/or community should benefit.

These five criteria inform this project in examining effective methods of delivering education and training to the residents of rural Australia.

Structure of this report

The next chapter (Chapter 2) describes the methodology used in the study. Chapter 3 is concerned with access to training and Chapter 4 with inputs and process, that is in-program delivery and content. The following chapter, Chapter 5, examines outcomes from training programs in the context of delivery methods, and Chapter 6 presents a model for considering cost effectiveness.

The five case study programs examined for the project are written up following Chapter 5. There is also an extensive bibliography of literature relating to education and training in rural and regional Australia.

CHAPTER TWO
METHODOLOGY

Literature review

The project started with an extensive search and analysis of two groups of literature; literature relating to effective delivery methodologies, with particular reference to methodologies for rural areas, and evaluation reports of courses and programs which had been run in rural areas.

The literature collected and analysed appears in the Bibliography of this report. The literature search revealed a number of other reports which incorporated extensive literature reviews, for example Butler and Lawrence (1996) which has a recent, extremely comprehensive literature review. This report does not duplicate that review, but rather incorporates relevant points made in the literature in the body of the report.

The five case studies

The second part of the project is a detailed evaluation of five education and training programs run in rural Australia. They were chosen to reflect a variety of delivery methodologies and industries which are situated in rural Australia. They include entry level training, non-formal continuing education and a formal TAFE course for those in the existing workforce. Programs for target (disadvantaged) groups are represented.

The case studies are:

- the Whole Farm Planning course, a non-accredited 40 hour course for farm managers,
- a special women-only offering of the Dairy Farm Management Certificate, a 120 hour TAFE course,
- Farm Best Practice program, a crop discussion group program for vegetable growers,
- Fin Fish Farm Attendants Traineeship, an Australian Qualifications Framework level 2 course, the first entry level course for aquaculture workers,
- a special offering for long term unemployed of the Certificate in Food Processing, an Australian Qualifications Framework level 1 course.

The National Training Reform Agenda has facilitated the development of entry level, or 'operative', training in Australian industries which previously had no formal training at that level. It has also provided opportunities for disadvantaged groups, such as the long term unemployed and older workers with experience but no formal qualifications, to gain formal qualifications. The Fish Farm (Fin Fish) Attendant Traineeship and an offering of the level 1 Certificate in Food Processing are examples of curricula developed to suit industry needs, and also

incorporating key, generic competencies identified by Finn (1991), Mayer (1992) and Carmichael (1992).

These two entry level courses are compared to a TAFE course for continuing education of farmers (Dairy Farm Management) and two non-formal training programs: one a course (Whole Farm Planning) and the other a discussion group program (Farm Best Practice).

The five courses are described in the Case Study section of this report.

NSW projects

Three ANTA funded NSW projects fed information into this project. They were *Rural Participation in Vocational Education and Training: Analysis of Barriers to Participation and Rural Delivery Preferences*, a report prepared for the Rural Training Council of NSW by Denise Grannall; and two reports prepared for the New South Wales Board of Vocational Education and Training: *Rural Women in Vocational Education: Pilot Mentor Scheme for Female Rural Students*, a report by Louise Conibear, Murrumbidgee College of Agriculture; and *Training Outcomes for Groups with Specific Needs*, Planning Division, NSW TAFE Commission.

Relevant findings from these reports are included with findings from the five case studies and points from the literature in the chapters which follow.

CHAPTER THREE
ACCESS

Effective delivery of education and training starts before the program enrols participants. The target group must be aware that the program exists, and must be able to obtain sufficient information to make an appropriate decision on whether to participate. Access to training programs is an equity, social and economic issue. Barriers to accessing training programs can disadvantage potential participants, and they can prevent potential participants from making their maximum potential contribution to their community and the Australian economy.

There are a number of facets to access:

1. Potential participants must be aware that the program exists.
2. Potential participants must perceive that the program is 'for them'.
3. The program must be affordable.
4. The program must be delivered at a suitable time and place.
5. The knowledge and skills of the potential participants must be considered in designing the program and when accepting participants into the program.

Information about the program

The National Taskforce on Flexible Delivery (1996) notes that lack of information is both a demand and supply side access barrier: that is, not only may potential participants not have sufficient information about what is available, but providers may lack sufficient information about potential clients or students. Palmieri, Blanksby and Hammond (1995) point out that good practice advocates making readily available the information and support needed to make a valid decision to undertake training. This information will often come from more than one source, and may include informal information from friends and colleagues as well as 'official' information, such as that from the program provider.

The vast majority of program participants interviewed for this project consulted both informal and official sources for information about the program, and for support in making their decision to enrol. These sources are usually in addition to the source of initial awareness about the program.

> Almost all of the participants in the Whole Farm Planning course became aware of the course through the media, but all but one then went on to consult neighbours, friends and advisers before enrolling. Many consulted farmers who had previously completed the course. About one half contacted the course provider.

> We probably [first saw the advertisement in] the *Examiner*, either that or *Tas Country*. We rang the DPIF [the course provider] up, spoke to some of the neighbours... (Whole Farm Planning participant)

Local course provider information

The special needs groups considered by TAFE NSW (1996), who include all those in rural areas, women, long term unemployed, those with disabilities and Aboriginal and Torres Strait Islanders, were found to require face-to-face consultation with program information officers or counsellors in order to access suitable TAFE programs.

Such officers are not always available in rural locations. Education and training providers should ensure that such people visit rural locations regularly for consultation with potential students.

> A local information day was held for the women only Dairy Farm Management course in the rural Circular Head area of Tasmania. Many of the women who participated in the program went to the information day before deciding to enrol.

Learner involvement in program design

Negotiating with the potential learners about all aspects of the program from content through to delivery mode and location and time of any face-to-face sessions, will assist the target group to access the training. Negotiation will facilitate the provision of relevant training delivered in ways which the adult learners prefer. Rodwell *et. al.* (1996) found that involving learners in remote areas in planning training allowed cultural and environmental factors to be considered in the timing of sessions.

Farmers prefer to be involved in establishing the topics of training programs. Lack of negotiation can cause participants to discontinue with the program.

> They just send you out a letter, but there was no way putting ideas forward that I could find. You took what you were given and that was it. (Non-continuing Farm Best Practice participant)

Local education and training committees

Local education and training committees can facilitate provision of formal and non-formal post-secondary education and training in rural Australia. The committees should have representatives of farmers, local industry, small business, education and training providers active in the area and members of the

community. A number of reports have recommended that local education and training committees be established, for example, Grannall (1995). Such committees are consistent with the principles for flexible delivery identified by the National Taskforce on Flexible Delivery (1996) which advocate active and ongoing collaboration between providers and clients, networking and cooperation between providers, and the development of effective client/provider relationships.

Local education and training committees should be linked to a national network which provides information on existing training programs, providers and efficient delivery methods. The committees should work in with bodies such as Industry Training Advisory Boards, which co-ordinate industry training on a State basis and are co-ordinated at a national level by National Training Councils.

The local education and training committees could be supplemented with a network of small business training co-ordinators.

Local Small Business Training Co-ordinators

A network of training co-ordinators responsible for identifying and meeting the training needs of a group of small businesses can both ensure small businesses are aware of suitable training, and ensure that required training is provided.

> English agricultural short courses are supported by a network of Training Co-ordinators who take responsibility for identifying the training needs of a group of farm businesses. The co-ordinators arrange suitable short course training.
>
> This model, described in Griffin and Zichy-Woinarski's (1996) report, has the potential to improve access to training for farm businesses in Australia. The Training Co-ordinator Networks could be expanded to include all types of small businesses in rural Australia.

Groups within a network could be based on local geographic areas, or on industry sectors, or a combination of both. For example, a co-ordinator might be responsible for all retail businesses in a regional centre, or for all emu producers in a state.

Training co-ordinators could be funded as part of Commonwealth or State vocational education and training budgets and/or by the small businesses themselves.

Cost

A number of reports, identified in Chapter One, have found that there are economic barriers to rural Australians accessing vocational education and

training. Economic barriers are associated with higher access costs and lower incomes compared to urban dwellers. The cost of education and training extends beyond the program fee to include travel, accommodation, other expenses such as child care and the cost of income foregone by not working, and/or the cost of any replacement workers.

Many are prepared to forego income in order to obtain a qualification. Participants in the Fish Farm Traineeship were prepared to accept a lower wage to undertake training, and so increase their job security. This participant in the Certificate of Food Processing gave up casual work in order to obtain a qualification and the chance of a secure job:

> Cause I actually forfeited about six weeks work to do it. ... The first day I was on the course we came down here to pick up some gear ... and one of the ladies came and said "What are you doing here," she said "I've just been ringing your place to get you to come to work." (Certificate of Food Processing participant)

Cost of education and training compared to alternatives

Farmers and other small business operators consider the cost of training in relation to the cost of other ways of obtaining information or skills. Many farmers engage private consultants for farming and business information and services. Some information and services can be obtained free from government extension agents and from rural stock and station agents. Such services are perceived as an alternative to education and training (Grannall, 1995).

Delivery mode, location and time

When, where and how the course is delivered are factors which influence the decision to enrol in the course. Location and timing of training impact on the cost of accessing training, as defined above. Location and timing have non-cost implications for suitable transport, child care and accommodation.

Delivery mode as an access factor

Many consider delivery mode when making the decision to participate in training. Thus delivery mode is an access factor.

Flexible delivery

Training delivered in a distance mode using print-based and/or electronic materials allows users to access training at times and in places which are convenient to them. Self-paced training programs and facilitators/tutors who are available 'on demand' by telephone or email enhance the flexibility of access to training.

Costs and the infrastructure required for electronic communication can be barriers to accessing education and training if it is delivered electronically. A

Queensland study which trialed computer-based communication and interactive satellite television with women in remote areas found that the cost of the technology in rural and remote locations prevented many women from accessing electronic communication (Grace, Lundin & Daws, 1996).

Flexible delivery is considered further in Chapter Four.

Delivery modes which facilitate peer interaction

Those who have been away from education and study for some time frequently feel threatened by a formal training environment, as Grannall (1995) found to be the case for many New South Wales farmers, and confirmed by Johnson, Bone and Knight's (1996) study of farmer training. Kilpatrick (1996a) found that a low level of education in the farm business management team inhibited participation in formal and non-formal training.

Some choose training programs because of the opportunity to interact with other participants. Many of the farmers gave the small group structure of the Whole Farm Planning course as a reason for taking part in the course. The opportunity to learn from others was given as a reason for joining all three of the case study programs for farmers:

> [The] small group thing was good. The cost came into it [my decision to participate], but it was within my expectations, that was OK, and the fact that it was in the evening. It was useful opportunity to talk with others, [and it] was another interesting thing to work with them, with what they were doing, and see what was happening. (Whole Farm Planning course participant)
>
> It was just perhaps a way I could measure what I was doing against other farmers in the district. (Farm Best Practice participant)

> Over half of the participants in the Whole Farm Planning course gave the opportunity for interaction with their peers as a reason for joining the course.

Time of training sessions

The timetabling of sessions should be flexible and fit in with the schedules of the target group. Sessions for those with responsibility for school age children should be in school hours, for example (TAFE NSW, 1996).

Many rural occupations have workloads which vary over the year, for example farmers and food processing workers. Seasonal and day-to-day on-farm commitments are the main reasons given by farmers for not participating in training (Kilpatrick,1996). Training times should fit with seasonal workload peaks and troughs.

The Dairy Farm Management Certificate course had a ten week break to coincide with the calving season.

The Certificate of Food Processing for casual seasonal workers, which included on-the-job training, was held during the low seasonal load on the factory.

Negotiation of time of sessions

Failure to negotiate with the target audience on timing of sessions can result in participants withdrawing from the program, as this farmer did:

> Just a note would show up here that so and so field day would be on at 2pm in the afternoon or something; if you are interested, front. (Non-continuing Farm Best Practice participant)

Location

Rural people are prepared to travel for training which they believe will be relevant and help them achieve their goals. TAFE NSW (1996) finds this to be so for special needs groups. People are prepared to travel further for a 'one-off' event than for training which requires a regular commitment (Grannall, 1995).

Location and session time are access issues for those whose business and family commitments make travel difficult or impossible. The Women's Programs Co-ordinator at the TAFE Institute summed up the way the location and time of a course allowed the women dairy farmers to access relevant education:

> As a women's program the benefit was that we met the needs of the client group, and that we took it to them, in the time frame and the place that was available to them. Had it not been held there, in the way that it was held, they would not have been able to participate. (Dairy Management course provider)

Non threatening venues

Non threatening venues should be chosen for programs targeted at those who have been away from education and training for some time. The venues for the Farm Best Practice discussion group program were local halls and pubs which suited the participants, who felt comfortable with their 'non training room' nature:

> Our sessions were conducted anywhere that was suited. They didn't have to go home and change; we took one another as we were. (Farm Best Practice participant)

Child care

Access to child care in rural areas is more difficult than in urban areas where the variety of child care services available give more flexibility:

> As a mum, one of the important things that prevents me or helps me do a course, is child care. In the country, to get your child into child care in town, you have got to book them in ahead. Often in the country you can't do that, you know, you are called upon today to help drench the calves and you had your kid booked in because you thought you were going shopping. You just don't do it. ... like the CROP course interested me, but then I thought no, the child care thing is going to get in the way. (Dairy Management participant)

Recognition of prior learning

Adults prefer training which is relevant to their needs. They see no value in spending time studying skills and knowledge when they are already competent, and will spurn programs which involve repetition of what they already know, as was the case with some of those who discontinued with the Farm Best Practice program.

Recognition of prior learning enables adults to study only those parts of a course or training program which cover the skills and knowledge they need to acquire. It does so by giving exemption or credit for those parts at which adults are already competent. Recognition of prior learning should encompass skills and knowledge acquired as a result of work and life experience as well as credit for formal study.

Although there is wide-spread support for recognition of prior learning in courses, there is considerable debate about the most cost-effective way of assessing adult students' prior learning. Assessment of prior learning, as distinct from granting of credit for past study, is complex (Cohen, 1992). Most of the debate centres around recognition of the prior learning of mature aged students with considerable life and work experience, but without 'matching' formal qualifications. Recognition of prior learning in the form of 'credit transfer' is relatively easy to apply where students hold certificates or other qualifications. It is a simple, though sometimes time consuming, matter to compare the syllabuses of the two courses.

Granting RPL for existing qualifications or other evidence of formal study was judged successful by students, employers and the other stakeholders in the Fish Farm Attendants Traineeship.

> I thought that [RPL] worked well. ... we only give them RPL under pretty strict conditions.... we decided the criteria as a group and if they met that criteria they were given it, and they could appeal against it. (Fish Farm course provider)

Articulation

Articulation of courses provides a training pathway which enhances access to training by allowing people to move in and out of training at various levels at times which are convenient. When combined with a system of RPL, articulated courses further enhance access to education and training. A full discussion of articulation is beyond the scope of this report. Refer to Zichy-Woinarski (1996) for an example of an articulated training pathway in agriculture education in Tasmania.

Key findings

Program participants consult multiple information sources before joining or enrolling in a program. Sources consulted usually include at least two of: the media, past program participants, employers and the program provider.

Local training co-ordinators can facilitate small business and rural industry access to appropriate and relevant training.

The indirect costs of education and training, including travel and income foregone, are barriers to participation for rural Australians, however many people are prepared to pay for education and training which they perceive as highly valuable. Small businesses consider the cost of education and training in relation to the cost of other ways of obtaining skills and information, such as from consultants.

Delivery methods which facilitate peer interaction are attractive to those already in the workforce. Consultation in the choice of time and location of training and provision of child care enhances access to education and training.

Recognition of prior learning and articulated training pathways facilitate access to education and training for rural Australians.

CHAPTER FOUR
DELIVERY METHODS AND PROGRAM CONTENT

Delivery structure

Effective training is conducted in small groups with the opportunity for interaction with the facilitator/instructor and with fellow participants. Training provides an opportunity for peer interaction, or networking, as well for the 'delivery' of new knowledge and skills. Training which recognises, and takes advantage of, the desire for such interaction is more likely to be successful. Training methods preferred by farmers are short courses, seminars, workshops, industry meetings and conferences followed by field days (Kilpatrick, 1996).

The Farm Gate Learning Project for women in NE Victoria:

- provided learner determined topics
- included child care and transport if required
- used community networks to contact potential participants.

(Chapman, 1989)

Relevant content

Those who are already in the workforce generally prefer training which is relevant, non threatening and directly applicable to their situation. The National Taskforce on Flexible Delivery (1996), for example, puts relevant skills and knowledge first on their list of individual and enterprise expectations of vocational education and training. There is some evidence that the existing vocational education and training system is not providing small business owner/managers such as farmers, with the information and skills which they require in ways in which the owner/managers want to learn. Grannall (1995) found that practising farmers generally considered existing institutional training services to be suitable for younger people, but few were satisfied with the training available for themselves.

It must be remembered here that training is often 'competing' with other information sources and with those who are providing services which can be substituted for skill acquisition.

Relevant content is a reason for participating in education and training:

> I was looking at a more sustainable way to run the farm; it was to do with the water and contouring and I was interested in the organic way of doing things. (Whole Farm Planning participant)

> I don't come from a dairy background, [I] married a dairy farmer. This is our first year share farming. (Dairy Management participant)

Target group involvement in decisions on training

Potential participants, their employers and other stakeholders should be involved in determining training provision.

Negotiation with employers

The employers of the casual seasonal workers were involved in designing the Certificate of Food Processing course, as were employer representatives from the fish farms with the Fish Farm Traineeship. In both cases, employers were well satisfied with their employees performance following the course:

> [The course] is very structured. ... It gives them a greater understanding before they come into the workplace, which I think is good. (Certificate of Food Processing employer)

> Both of them [my employees] have [suggested changes to work practices because of the course], yes. ... I think they have been taken seriously. (Fish Farm employer)

Negotiation with the target group

Participants prefer to be involved in establishing the topics of training programs, and the timing of sessions. Lack of negotiation caused this farmer to discontinue with the Farm Best Practice Program:

> They just send you out a letter, but there was no way putting ideas forward that I could find. You took what you were given and that was it. Just a note would show up here that so and so field day would be on at 2pm in the afternoon or something; if you are interested, [then] front. (Former Farm Best Practice participant)

Learner centred delivery

Adult learners prefer a learner-centred approach to a teacher-centred approach. Those who lack confidence as learners respond better to an adult learner-centred delivery style. This emerges, for example, from the TAFE NSW (1996) report into special needs groups and from the five case studies here. Such a delivery approach allows learners to acquire the personal and learning skills which lead to successful education and training outcomes.

Small groups and confidence as a learner

Small groups of participants who are comfortable with each other can help overcome a lack of confidence in one's ability as a learner, as for this farmer:

> I am not so big on lecturers and things. I left school when I was 15 and I didn't have any intention of going back. ... the group on the whole was good, everyone communicated well, question time was good, good interaction between the group. Everyone sort of knew everyone, including the lecturers. (Whole Farm Planning participant)

Learning from each other

Discussion between participants can be a learning experience in itself. It also allows participants to test ideas and possible actions against the values and norms of their peer group, and to learn from others' experiences. The process of 'checking' possible new actions or strategies with peers facilitates changes to behaviour, by allowing people to examine their own attitudes and values toward the new practice. There is a considerable amount of research which holds that interaction with peers assists the adoption of innovations (see for example, Rogers, 1995).

> [The Whole Farm Planning course] gave you confidence in the stuff that you picked up through papers and the media and bits and pieces. It sort of put it into perspective, and some of that was by tuition and some of it was sharing it with the people. (Whole Farm Planning participant)

> The interaction was good. It was very interesting to see the group dynamics change with time. ... they enjoyed coming along and talking to one another, there was a lot of information exchanged both before and after the meeting. (Farm Best Practice facilitator)

Those who are already in the workforce and are learning in an area where they already have a pool of knowledge and skills appreciate the opportunity and value of learning from their peers:

> I think the major point there is sharing ideas with fellow participants. I think you got more out of that than anything. (Farm Best Practice participant)

> Probably [the most useful thing about the program was] learning from others, the interaction between the growers which I felt was excellent ... there were growers who I thought were very efficient growers; seeing ideas that they were running off with, things that I hadn't thought of before, and vice versa. (Farm Best Practice participant)

> It wouldn't have been a thing you could have done at home by correspondence - it was something that, you had to be there as a group and all egg each other on. (Whole Farm Planning participant)

Peer interaction and confidence to implement knowledge and skills

One of the functions of participant interaction is to build participants' confidence as learners by letting them know that they are not alone in feeling unsure of their ability to achieve in education and training.

> [The thing I liked most about the program was] the interaction between the participants; its sharing your problems with someone else, them giving advice, and vice versa. A good support network, a fairly diverse group, we weren't all doing the same. (Whole Farm Planning participant)

> You are there with a group of people that are sort of on the same wavelength and they are confirming ideas that we have. (Whole Farm Planning participant)

> The group was pretty helpful to each other. Even when we had the field trips, everyone tended to play with each others' soil and say, yeah well this is the problem I have, and yeah I have the same sort of problem. And that was good value. (Whole Farm Planning participant)

Homophilious groups

Many of the women enjoyed the women-only composition of the group. They feel comfortable asking questions that may have displayed ignorance:

> We can be open, because we are very open. We don't want the men next to us nudging us to say shut up... If it had been a mixed group, the men would just dominate it against us. ... I think we didn't mind being ignorant with each other after a little while. It took a little time I think to even for us to say "I don't understand, what's that mean? I don't do that". (Dairy Management participants)

Facilitators and interactive learning

The course co-ordinator of the Dairy Farm Management Certificate aims to encourage as much interaction between course participants as possible, by creating a non threatening environment:

> The style of it was we basically sat around and talked, and I think that them sharing their ideas, bouncing their experiences off each other is always really well received. I don't think it matters where you go, people seem to get a lot out of that. (Dairy Management facilitator)

The participants were very positive about the delivery style of the facilitators, and the interactive environment which was created. Participants had an excellent opportunity to learn from each other as well as from the facilitators:

> The people that they had coming in were pretty good really; the lecturers were throwing their ideas around. I sort of liked the debating. I like to get involved. (Dairy Management participant)
>
> Somebody would say something and we'd have big debate on it. It was good because we learnt as much from each other as we learnt from [the facilitators]. (Dairy Management participant)

Credible facilitators

Facilitators and instructors must have credibility in the eyes of the adult learners. This is particularly important where training is being delivered to practitioners who are already working in the area, and may have considerable expertise in the practical application of the subject matter. Comments from farmers participating in the case study programs demonstrate the value of credible facilitators:

> One of my main reasons [for enrolling] was to access information and people. There is a wealth of knowledge that I got from the course that I didn't even know existed. You can read so much in a book and interpret it in so many ways, but when you have somebody there who can clarify thoughts, who can give you ideas and open things out, that was a tremendous resource. (Whole Farm Planning participant)

Farmers need to respect the facilitators, and perceive that they are able to provide knowledge and skills which will be applicable to their own farms. Those farmers who do not expect this will not participate:

> I have heard some farmers who have been to those things [Farm Best Practice sessions], and they have felt these people who do not farm, who probably couldn't grow a potato if they tried, are telling people what to do from the theory (non-participating farmer)

The farmers interviewed by Grannall (1995) also expressed concern about the credibility of many rural training providers. The lack of credibility of training providers was often linked to their failure to recognise prior learning.

Quality facilitators

A recent report on delivery of vocational education and training in remote Australia (Rodwell *et. al.*, 1996) found that staff involved in delivery in remote areas should be culturally sensitive, have empathy with the client group, have effective communication skills and be flexible in thinking and action. Both participants and others involved in providing the case study programs recognised the importance for effective learning of having facilitators who were not only credible, but could also relate to the participants.

> [The co-ordinator] was what I liked most because he was most enthusiastic. He was just terrific. He got everyone involved. (Dairy Management participant)

> The two chaps that run it up this way were known to us all. Their delivery was excellent. I think that it is quite important that you can get people that can run a program that can have a bit of laughter and fun and games with the people involved. (Farm Best Practice participant)

> It was an important topic [financial management], but it wasn't presented in a correct way. Not in a manner that had everybody involved. We went to sleep. (Whole Farm Planning participant)

Practical, experiential learning

Grannall (1995) recommends that farmers should be part of action learning and action research projects which form a dissemination pathway from researchers to farmers, facilitated by experts such as extension officers and agricultural educators. Such training is interactive, with input from farmers, researchers and those charged with disseminating knowledge and skills to farmers.

Participants in all five case study programs commented favourably on the practical, hands-on parts of the programs:

> [I liked] the fact that you can go out on the farm and you can walk around somebody else's farm and see what they do. It is stimulating. (Dairy Management participant)

> Having that work experience gave me the confidence. It made it easy to fit when we came. We knew where to go, you knew what to do. (Certificate of Food Processing participant)

> The best thing about it [the program] was walking around other people's paddock ... and hearing what they had to say. (Farm Best Practice participant)

Flexible delivery

The term flexible delivery has many different meanings. The National Flexible Delivery Taskforce took the view that:

- flexible delivery is a way of providing what the learner wants, making sure that what they want is clearly specified in terms of what (context), how (mode), when (timing and sequencing) and where (location), and

- for it to be a reality, the client or learner should be aware of the options available to them and the training provider should be capable of responding to the choices made by the client or learner. (National Flexible Delivery Taskforce, 1996, 1)

Many of the program design delivery practices referred to already in this report are 'flexible delivery'. These practices are:

- Negotiating session times with participants (Dairy Management course),
- Delivering in local areas (Whole Farm Planning, Farm Best Practice, Dairy Management course),
- Negotiating program content with employers (Certificate of Food Processing, Fish Farm Traineeship),
- Selecting venues to meet special needs such as child care (Dairy Management course),
- Designing a course using a wide range of existing education and training infrastructure and taking the students to the facilities (Fish Farm Traineeship),
- Using a factory site for on-the-job training, even though the trainees were not employed by the company (Certificate of Food Processing),
- Tailoring a course to marry the needs of employers, participants and the social objectives of the government (Certificate of Food Processing, Dairy Management).

Other aspects of flexible delivery can be broadly described as 'distance education'. This can be either using print based materials, or electronic delivery, or a combination. Either of these can be combined with some face-to-face component.

Electronic delivery

Electronic delivery is often cited as the solution to the problem of providing equitable access to education and training for rural Australia. Electronic media have the potential to deliver the same resources to homes, businesses and educational institutions regardless of their location. The Educational Network Australia (EdNA) has been established with the aim of providing access to those living in all areas at local call rates for all levels of education (NBEET, 1995).

Technical requirements

Two pilot projects of electronic communication in rural Australia have found that some areas of rural Australia do not yet have telecommunications infrastructure which is capable of handling electronic data flow. The Community Information Network pilot which placed computers in homesteads in farming communities in Tasmania and the National Farmers' Federation's Farmwide project which has 1000 computers with on-line access on Australian farms and the project by Grace, Lundin and Daws (1996), 'Voices from Elsewhere', all found some technical difficulties related to the telecommunications infrastructure of old telephone lines and exchanges.

Cost

A second barrier to electronic delivery is the cost of computers, modems and on-line time which those wishing to access training may have to incur. Satellite

dishes and other technology for interactive visual communication is still relatively expensive. Technical support for remote users is potentially expensive. The Open Learning Agency in British Columbia, Canada requires that all students purchase a standard computer and software as a condition of enrolment. This reduces the cost of technical support by using 'tested' software and hardware. Development of materials for electronic delivery is often overlooked, can be very expensive.

Simple 'eye ball' cameras and shareware programs such as CUSeeMe have some potential for real time interaction. Electronic mail is another cheap and tested means of electronic communication between trainees and between instructors/facilitators and trainees.

The National Taskforce on Flexible Delivery (1996) suggests that new technologies will be most useful for delivery of vocational education and training when high costs are shared between the state and Commonwealth governments. The Taskforce recommends that the government capital works programs should enable investment in flexible delivery infrastructure.

'Cultural' and skills barriers

There are also 'cultural' barriers to the use of computers and electronic communication, particularly for the existing rural workforce who have not been exposed to computers in school. Users need to be comfortable with the technology they are using, just as they need to be comfortable in a face-to-face training situation.

Interaction

The findings from the case studies and other literature referred to in this chapter points to the major role which interaction between participants and with instructors plays in facilitating learning. Rodwell et. al.'s (1996) report on vocational education and training delivery in remote areas goes so far as to recommend that all students in remote areas should have access to a trainer or tutor at some stage during the learning process. It is possible to use electronic communication for peer interaction, but the cultural barriers must be recognised and strategies put in place to address these barriers. Establishment of peer electronic networks and building a requirement to use them into the training program would go some way to ensuring that peer interaction is a feature of electronic delivery. Video conferencing also allows face-to-face contact.

> Students in remote areas of South Australia enroled in courses offered by the Ceduna Campus of the Spencer Institute of TAFE enjoyed studying via video conferencing because of the face-to-face contact and interaction with other students and lecturers (Rodwell *et. al.*, 1996).

> The Open Learning Agency in British Columbia, Canada, operates a program which uses a range of technology to delivery learning, depending on resources and learner needs. Computers are an essential element of the program delivery.

Further information about the Open Learning Agency delivery is to be found in Griffin and Zichy-Woinarski (1996).

Electronic communication and computer-based education have strengths including flexibility for the learner, a dynamic learning environment and the possibility of interaction with fellow learners and instructors. However, care must be taken that electronic communication does not impose another barrier to accessing training on already disadvantaged groups. The barrier could arise because of lack of confidence and familiarity with the technology, or because of financial or locational reasons. Those who lack the confidence to access currently available education and training are also likely to lack the confidence to use electronic technology when training.

Print and electronic materials

Delivery modes which use pre-prepared materials provide consistent quality of delivery. Content experts can be used to prepare materials for flexible or mixed-mode delivery, as can the services of instructional designers and technologists. This means that all students can benefit directly from the input of such experts in a way which those learning face-to-face with a teacher of facilitator generally cannot.

> The Certificate of Rural Office Practice (CROP) course combines print-based materials which can be studied in the learner's own time, with telephone and face-to-face contact with other participants and facilitators. The program, which is offered by TAFE Institutes around Australia, has been rated highly by participants and facilitators in two evaluations (Southwell, 1995; Burns, 1991).

The high cost of producing quality materials is identified in the literature. The CROP course is a good example of maximising the use of materials by having different institutions around Australia offer the course based on the same core of materials, adapted for local needs.

Entry level training

Block release

Employers and students are positive about the combination of on- and off-the-job training provided by block release delivery methods used to deliver traineeships and apprenticeships. For example, the evaluation of the Tasmanian Rural Traineeship, which includes block release, by Enterprise Marketing (1993) found that trainees were satisfied with the quality and content of both on- and off-the-job training received.

Liaison between employers and training institutions is vital to the success of combined on- and off-the-job training schemes. The improvement in liaison between TAFE and employers over the period between the 1991 (Tasmanian Rural Industry Training Board Inc., 1991) and 1993 (Enterprise Marketing, 1993) reviews is a major contributing factor to the favourable review of the Tasmanian Rural Traineeship in 1993.

> The Fish Farm Traineeship's training blocks were timetabled in consultation with employers, to fit with the least busy times in the fish production cycle

Mentoring

The pairing of new entrants with experienced practitioners as a method of vocational education is age-old. The pilot study at Murrumbidgee College of Agriculture (Conibear, 1995) paired young women entrants to agriculture with older women who were established in the field. The mentoring system assisted new entrants chiefly by developing and strengthening support networks.

> FARM Cheque 500 is a computer management skills training program which uses a combination of one-to-one mentoring and discussion groups. All instruction uses the farm's own records (Burfitt & Godyn, 1989).

Other desirable attributes

Accreditation

Courses which are accredited and offer clearly articulated pathways to other training are desirable. Those who are employed, or who are seeking employment, prefer such courses, particularly when the articulated pathway has multiple entry/exit points which encourage career development through training.

One of the long term unemployed participant in the Certificate of Food Processing course placed the chance to obtain a qualification, and possible stable work ahead of an offer of short term employment:

> Cause I actually forfeited about six weeks work to do it. The first day I was on the course we came down here to Lactos pick up some gear and one of the ladies came and said "What are you doing here," she said "I've just been ringing your place to get you to come to work." One bloke [an employee] left... (Certificate of Food Processing participant)

For another, succeeding in a the formal course boosted self esteem:

> Well obviously to complete a course like that and to pass in all the subjects, obviously it is good for self esteem, good to actually know that you have done something instead of sitting around and doing nothing. (Certificate of Food Processing participant)

Farm owner/managers and other small business owners place less value on accreditation than they place on the perceived relevance of training. As Grannall (1995) says:

> ... the notion of accredited training itself is not a sufficient motivator for rural practitioners. Rural practitioners want specific and accessible information and skills. (Grannall, 1995, 4)

Key findings

Effective training delivery methods - features of effective training

The findings from the case studies and the other material considered in this report suggest the following list of features of effective training. These features will also encourage participation.

1. Interactive training, with opportunities for discussion and interaction with both fellow participants and 'experts'
2. Relevant topics, applicable to target group's situation
3. Credible facilitators/instructors and materials
4. Groups of people who regard each other as similar, and are comfortable with each other
5. Reduction or removal of barriers such as child care and travel
6. Sessions times and venues to suit target group's work and personal lives
7. Short sessions
8. Value for money
9. Programs that can be taken in manageable chunks
10. Marketing through associations, community groups and organisations.

CHAPTER FIVE
PROGRAM OUTCOMES

Program retention and completion rates

NSW TAFE data shows that rural students (defined as those living outside Sydney, Wollongong and Newcastle) are more likely to 'drop out' of TAFE modules in the initial few weeks of study. Whilst rural women are more likely than men or urban women to 'drop out' in the initial period, those who do persist with their study have higher module completion, or pass, rates than the other groups (TAFE, NSW, 1996).

The TAFE NSW report highlights the need look beyond barriers to enrolment in training and to identify and address factors which are critical to success once people have enrolled in training. Self-confidence as a learner is a critical factor in the success of women in TAFE courses.

Changes to attitudes and knowledge following the program

Attitude change

The Whole Farm Planning course was particularly effective in bringing about attitude change, for example in relation to planning and environmentally sustainable farming practices, as these two quotes illustrate.

> Well, I just thought to ask "why" rather than "why not" all the time. Yeah, you don't put up the barrier in your mind all the time. (Whole Farm Planning participant)

> Just the general or the attitude change, that you don't just sort of rush out in the morning and do something for the sake of doing something. There has to be more thought given to it. (Whole Farm Planning participant)

Confidence to implement change

In order for the knowledge, skills and attitudes acquired through training to be implemented in practice, for example on the job, the training participant has to be confident that they can apply the knowledge and skills to their own situation:

> I suppose one was receptive but didn't have the confidence to make the changes and to be given the confidence to consider the changes I think that is probably one of the things [outcomes of the course]. (Whole Farm Planning participant)

> Like if you want to know about fish stress or feeds you know who to talk too, you have a basic knowledge and you go on from there. (Fish Farm participant)

A further aspect of confidence to implement change is to do with norms and values. The training participant must feel confident that a potential change is consistent with the attitudes, norms and values of peers. Groups of peers are an effective way of allowing confirmation of peer values and norms, and so facilitating the implementation of change:

> There were some portions of [the Whole Farm Planning course] I guess that confirmed the way I have been thinking, and that other people think the same way. I suppose that gives you confidence that others either agree with you or understand your point of view. (Whole Farm Planning participant)

> ... options, things that you hear other people discuss. It might not be the way we are doing it but I take it home ... And sometimes there is a good idea there that we have been able to say, yeah maybe we'll try that next year ... (Dairy Management participant)

Work practices

A measure of the effectiveness of training for program participants who are already in the workforce is whether the training program has lead to any changes in work practice.

The Case Studies section of this report documents the extent and nature of the changes made to work practices by those who participated in the three programs for those currently farming.

> 94% of Whole Farm Planning participants had changed some aspect of their farming practice following the course.
>
> Over half of the Farm Best Practice program participants had made a change influenced by the program.
>
> Most of the Dairy Management women participants had made or planned changes.

Entry level training

Employers of the Certificate in Food Processing participants and the Fish Farm Traineeship noted work practices that reflected the knowledge and skills covered in the courses:

> They do [use skills and knowledge learnt on the course], in particular relation to hygiene. Safety certainly, they are getting

involved in passive identification and so on throughout the work place. (Certificate of Food Processing employer)

Benefits from changes

The Case Studies outline specific benefits flowing from program participation. Most of those in the three farmer courses expected benefits in terms of higher profit, production or improved sustainability.

> Whole Farm Planning participants reported the following benefits attributable to the program between three and five years after they completed the program:
>
> Improved sustainability (88%)
>
> Financial or productivity gain (69%)
>
> Reduced workload or improved time management (38%)

Employment

Active employer involvement in developing a training program contributes not only to the success of the program, but also to the match between knowledge, skills and attitudes of employees (or prospective employees) and those required by the employer. The Certificate in Food Processing (AQF level 1) offered to long term unemployed in order to provide a pool of trained seasonal workers in cheese manufacturing in North West Tasmania was developed by employers, an industry training board, the Commonwealth Employment Service (CES) and a TAFE Institute in a regional centre working collaboratively.

On-the-job training for those not employed by the company providing the on-the-job training site was a feature of the course. Absence of suitable specialised simulation training facilities for off-the-job training is a common resource deficiency in rural areas. Employers found the resultant opportunity to observe potential employees in both on and off the job training situations was an advantage in selecting employees, while those who gained employment following the course found the on-the-job component increased their confidence in the workplace:

> Once they had done this course then when they were employed they knew exactly what was wanted, so the likelihood of them staying on and being suitable for the job was higher. (Certificate of Food Processing employer)

> Having that work experience gave me the confidence. ... It made it easy to fit when we came. We knew where to go, you knew what to do. (Certificate of Food Processing participant)

Despite high unemployment levels in rural Australia, trained workers can get jobs. Thirteen of the 15 Certificate of Food Processing workers obtained casual employment following the course.

> All of the 1993 and 84% of 1991 Tasmanian Rural Trainees were still employed at the end of their traineeship period (Enterprise Marketing, 1993; 1991).

Networks

Participant interaction with each other and with 'expert' facilitators during training builds networks which function long after the training program ceases. The isolation experienced by many living and working in rural areas reduces the opportunity to build information and support networks. Small business managers in rural communities, including farmers, do not have the networking opportunities available to those working for large organisations in metropolitan areas. Getting to know experts who could be useful information sources in the future was a benefit to many:

> Now we can talk to each other. Now we have some sort of commonality. (Whole Farm Planning participant)

> The other thing I found excellent was that we had a healthy mixture of speakers. It made the DPI a real entity. I could go in there and you just might see someone you know now. (Whole Farm Planning participant)

> The fact you are going to know all the people as well; that is very important ... that you do within the industry. You get a good introduction in that respect. (Fish Farm participant)

Programs can encourage the development of networks, and expert contacts, as the Whole Farm Planning course does.

> At the last session participants in the Whole Farm Planning course are given a list of names, addresses and phone numbers all the session presenters (usually eight to ten different people per course).
>
> "We say if you personally want to follow up on finances [for example] there's the person. Or if your group wants to get that person back to talk to you more, there's the phone number." (Whole Farm Planning co-ordinator)

Future training directions

Effective training should encourage participants to seek further training by developing and reinforce their confidence as learners. Once the learners have experienced successful education and training outcomes they will be willing to attempt further education and training.

These two quotes from former long term unemployed people who gained jobs in a cheese processing factory on completion of a Certificate Level 1 course illustrate the confidence that a successful training experience can develop:

> I'm thinking of going back to TAFE at night and doing a computer diploma, associate diploma. ... What [the Food Processing Certificate course] did for me was that it gave me more confidence in myself, because I got a job. ... I think it gave me back a lot of my confidence and self esteem. (Certificate of Food Processing participant)

> They were going to pay someone from [the factory] to go over there [a cheese making course in Victoria]. I put my name down for that. (Certificate of Food Processing participant)

For some, their course was the start of an on-going learning process:

> Doing the course was the beginning of the awakening ... in our whole business planning with my wife and I. Setting up here and the further education we have done using a consultant, that has probably been the next step on from the Whole Farm Plan course. (Whole Farm Planning participant)

Key findings

Self-confidence as a learner is a critical factor in the retention and success of participants in education and training.

Programs which encourage and facilitate interaction between participants and with 'expert' facilitators are particularly effective in bringing about attitude change, developing confidence to implement changes to practice and establishing learning and support networks which continue to function long after the training program is finished.

Active employer involvement in developing a training program contributes not only to the success of the program, but also to the match between knowledge, skills and attitudes of employees (or prospective employees) and those required by the employer.

Effective education and training encourages participants to seek further education and training by developing and reinforcing their confidence as learners.

CHAPTER SIX
COST EFFECTIVENESS

Costs and rural training

The cost barriers to the provision of education and training in rural areas are well documented. Reports such as National Board of Employment Education and Training (1994b; 1991) and Clarke (1987) note that there are economic barriers to accessing training for rural Australians. Most of these barriers are related to the small numbers of students wanting a given training program in any one rural location, and the difficulty in justifying provision of face-to-face delivery for very small classes. Many of the alternatives to traditional face-to-face provision require expensive technology (for example, interactive satellites) or involve travelling by teaching staff. Rodwell *et. al.* (1996) found that costs of instructor travel and accommodation were large when training was taken to students in remote communities.

There are two direct cost-related consequences of small rural student numbers: one is that the training programs which are delivered in rural locations tend to have a higher cost per student than similar programs delivered in urban locations; and the other is that students who do participate in training which is not offered in their own locality incur costs associated with travel, accommodation and time away from their job which are not incurred by their urban counterparts.

Measuring cost effectiveness

Cost effectiveness is determined by the *cost* of training delivery, say cost per training hour, and also by the *effectiveness* of that training, which depends on the outcomes of the training. Outcomes can accrue to individuals, businesses, communities and society as a whole. Cost effectiveness of training can be measured by a wide range of performance indicators.

Possible performance indicators are:

- target group participation rate
- module and program completion rate
- 'quality' of training, assessed subject 'experts' and training 'experts'
- student assessment of training 'quality'
- assessment of the on-the-job performance of training 'graduates', or performance in the community
- employment rate of 'graduates'
- participants' further participation in education and training
- average cost per student contact hour.

Cost effectiveness is a more appropriate approach than cost-benefit analysis for considering education and training activities (McDonald, 1995). Cost-benefit analysis converts all costs and benefits to monetary terms. However, many benefits cannot be measured in monetary terms.

> For example, the Whole Farm Planning course influenced some participants to fence their stream banks. How much is the consequent reduction in run off into streams worth?

Some of the performance indicators used in measuring cost effectiveness can be expressed as a ratio per cost unit (or per dollar).

Cost effectiveness measurement has several weakness. These include: costs and outcomes of training cannot easily be compared across programs and across groups of trainees; outcomes are not all immediate, many emerge only over time, and so need to be discounted for comparison; and there is a degree of subjectivity in comparing various performance indicators, for example, how can changes in motivation be compared with increases in knowledge, or with improved employment rates 12 months after training? (Meyer, 1977).

A further weakness occurs when different costs and outcomes apply to different stakeholders in the training program.

> For example, individual participants in the Dairy Farm Management Certificate for women paid a much smaller amount than the normal course fee because of government subsidy, while the cost to the government was greater than for a normal course because there was an additional expense for child care.

Issues in cost estimation

The cost of training delivery varies according to the content of the training and the nature of the occupation to which the training applies, as well as according to class size, as mentioned above. There is variation in delivery cost depending on the method of delivery which is chosen, be it face-to-face, print-based distance mode, electronic delivery or some mixed-mode combination of these. Comparison of program costs is also complicated by the way in which fixed costs are treated, including choice of time over which they are amortised. The fixed cost of material development should be spread over the period for which the material is expected to remain current. Buildings and equipment will generally have longer useful lives and so their costs should be spread over a greater number of training hours.

Examples of delivery costs

Because cost of training delivery depends on the two broadly defined factors of 'content' and 'delivery mode' it is not appropriate to simply compare the costs of two different training programs. An example of the comparison of cost of training, expressed as cost per training hour, appears in Taylor, Kemp and Burgess's (1993) report on mixed-mode industry training. They found the cost of delivering two workplace training programs varied from $2.76 to $13.71 per training hour, depending on the program and the delivery mode (see Table 1).

Table 1 Training costs per training hour by program and mode

Mode / Program	Face-to-face	Mixed-mode
Occupational health and safety program for oil rig workers	$13.41	$11.42
Fire service training	$13.71	$2.76

Source: Taylor, Kemp and Burgess (1993)

Mixed-mode in both cases was a combination of print-based and face-to-face delivery. The occupational health and safety program also used videos and interactive computing. Taylor, Kemp and Burgess (1993) point out that the cost of mixed-mode delivery would be far less if the cost of material development was spread over their maximum expected life, instead of the more conservative estimate used in their calculations. There would also be a reduction in cost per training hour if the number of workers to be trained was greater.

Recognition of prior learning

Whilst assessing prior learning can be time consuming and expensive, there may be savings in delivery costs if students do not require all parts of a course.

Savings are less likely in rural areas where class numbers are small, and one less student means spreading a fixed class delivery cost over a smaller number of students. However, there can be delivery savings, such as in the case of the diving component of the Fin Fish Farm Attendant Traineeship where a private provider provided training on a fee per student basis.

Self assessment is an option, especially for non-formal training programs. may be feasible for formal courses. Especially appropriate for rural small business managers who are involved in training because of the information and skills it provides rather than for the credential. Further research is needed into ways of assessing RPL that are both cost effective and academically effective.

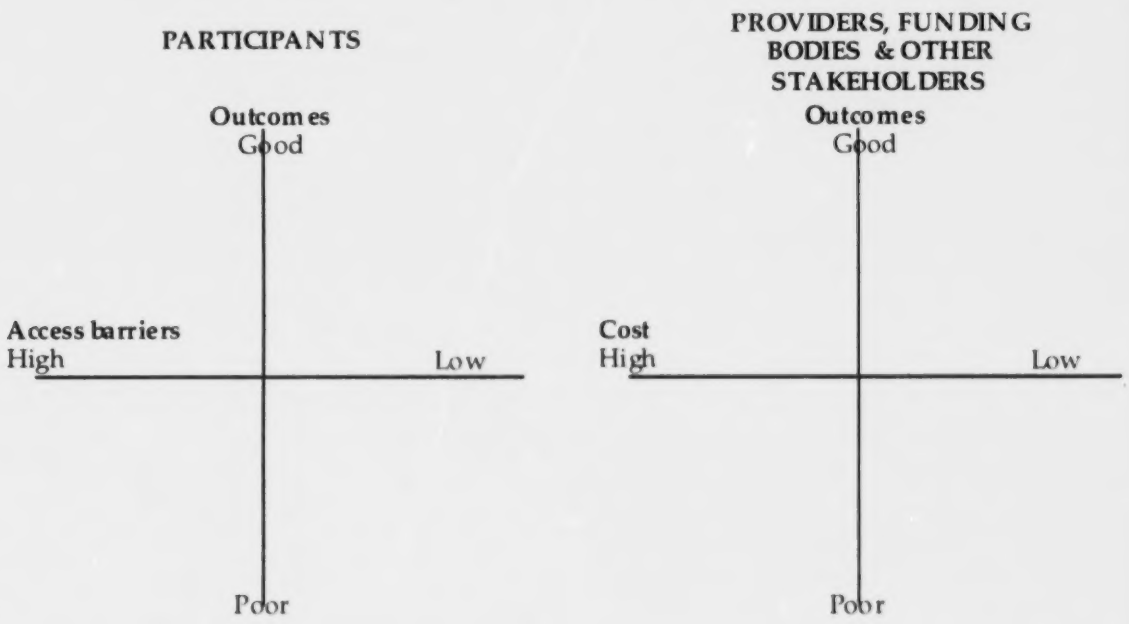
Framework for considering cost effectiveness

This report suggests a framework for evaluating the effectiveness of training programs by first partitioning stakeholders into for two groups:

- program participants, and
- program providers, funding bodies and other stakeholders.

For each group, the costs and the outcomes or benefits of the programs are considered. Costs for participants are expanded to include all barriers to accessing the program.

Programs are placed on a grid according to how they rate in terms of outcomes and costs. The axes for participants are outcomes of training and barriers to accessing training and the axes for providers, funding bodies and other stakeholders are cost of provision and outcomes.



Participants' outcomes for the cost effectiveness framework will vary according to the program being evaluated, but will include all or some of:

- employment outcomes
- changes to work practices
- changes to lifestyle
- business outcomes such as productivity, profitability, sustainability.

Participants' access barriers for the cost effectiveness framework will vary according to the program being evaluated, but will include all or some of:

- cost of training (including opportunity cost and cost relative to alternate information sources)
- location and time barriers

- cultural barriers
- technology barriers
- prerequisites, both explicit and implicit
- availability of information about the program.

Provider, funding body and other stakeholders' outcomes for the cost effectiveness framework will vary according to the program being evaluated, but will include all or some of:

- target group participation rates (this will be strongly correlated with participant access barriers)
- program completion rates
- participant achievement (pass rates or similar)
- degree of quality assurance of training
- outcomes at an industry or community level such as a lower unemployment rate, reduction in injuries, better quality products, improved environmental management.

Provider, funding body and other stakeholders' costs for the cost effectiveness framework will vary according to the program being evaluated, but will include:

- fixed costs such as buildings and technological equipment
- direct delivery costs
- cost of support services, evaluation and infrastructure
- cost of any subsidies.

Placement on the cost effectiveness evaluation framework is decided by an assessment of where a program fits relative to other programs and/or how those doing the evaluation think the program should or could perform.

Participants

Placement on the outcome and the access barriers axes is best determined by a survey of current and recent participants. Potential participants, that is those who fall within the target group but who have not enroled in the program, could also be surveyed to determine the nature and extent of access barriers.

Providers, funding bodies and other stakeholders

Relative performance on the outcome scale will be informed by measurement of program outcomes against program goals and objectives. Relative performance on the cost scale will be informed by consideration of actual and budgeted costs and any costings of similar programs which are available.

An attempt is made to place each of the five case studies on the cost effectiveness grids. These grids are to be found at the end of each case study in the following section of the report. Note that these are attempts to synthesise all the data obtained about the programs. The grid should next be tested on program participants, providers and other stakeholders.

Key findings

Cost effectiveness is determined by the *cost* of training delivery and by the *effectiveness* of that training, which depends on the outcomes of the training. Outcomes can accrue to individuals, businesses, communities and society as a whole.

The cost effectiveness of a training program is difficult to measure in monetary terms because many of the costs and benefits are non-monetary and benefits may only be apparent over a long period of time, for example improvements in environmental sustainability flowing from a training program for farmers.

Often, different costs and outcomes apply to different stakeholders in the program (participants, funding bodies, employers, training providers). The delivery mode and treatment of fixed costs of delivery (for example, buildings, material development costs) affect measured costs.

This report suggests a framework for evaluating the effectiveness of training programs by first partitioning stakeholders into for two groups:

- program participants, and
- program providers, funding bodies and other stakeholders.

For each group, the costs and the outcomes or benefits of the programs are considered. Costs for participants are expanded to include all barriers to accessing the program.

Programs are placed on a grid according to how they rate in terms of outcomes and costs. The axes for participants are outcomes of training and barriers to accessing training and the axes for providers, funding bodies and other stakeholders are cost of provision and outcomes.

CASE STUDIES

This section describes the five case study courses, and presents findings relating to the effectiveness of each.

The case studies are:

- Whole Farm Planning course
- Dairy Farm Management course
- Farm Best Practice program
- Certificate in Food Processing course
- Fish Farm Attendant (Fin Fish) Traineeship.

The structure of each of the case studies is a background to the program, the methodology for collecting the data, and the evaluation of program effectiveness. Effectiveness is considered under the headings: Access, Delivery, Changes and Results of changes.

WHOLE FARM PLANNING COURSE

Background

The Whole Farm Planning (WFP) course commenced in Tasmania in 1987 and was run jointly by the TAFE, (then) Department of Agriculture and Greening Australia. The first National Soil Conservation Program (NSCP) funded course was run in May 1988.

In 1990 a full-time facilitator was appointed to the then Department of Agriculture (now Department of Primary Industries and Fisheries, DPIF) to run the Whole Farm Planning course in accordance with the guidelines of the National Property Management Planning (PMP) Campaign. Funding was provided through the National Landcare Program with matching contributions from the state government.

In 1995 the name Farmwi$e was adopted by the DPIF to cover the Tasmanian PMP program, which in addition to Whole Farm Planning courses, also offers short courses and workshops on financial and farm risk management planning.

Objectives

The objectives of the Whole Farm Planning (WFP) course are to provide land owners and their advisers with knowledge which will improve their decision making ability in business and achieve a more sustainable natural resource use (M. Horne, Farmwi$e facilitator, DPIF, 1996).

The outcome of the Whole Farm Planning course is not a static plan, but an integrated and ongoing approach for short, medium and long term planning to achieve personal goals.

Course details

The Whole Farm Planning course runs for approximately 40 hours, usually consisting of 7 to 8 evening sessions and two full day sessions which include a field trip. The exact times and lengths of courses varied between districts. Courses are run in local venues such as halls.

There is a variety of topics covered in the course which came under the headings of physical farm planning, management and financial planning and implementation. Specific topics include mapping according to land capabilities, water, catchment, bio-diversity, trees, business planning, risk management, negotiating with financiers, farm planning, communicating objectives, succession planning and future planning. Early offerings of the course placed less emphasis on financial aspects of planning than more recent offerings.

Participant profiles

Initially the courses were targeted at commercial farmers rather than 'hobby' farmers (those that did not derive their main income from the land). More recently both groups have been targeted. (D. Sprod, ex-facilitator Whole Farm Planning, personal communication, 1996)

Enrolment is by farm management team, rather than individual, and a single fee covers any number of people from the same farm. People attend as couples, or owners and managers. Sometimes the farm is represented by different people at different sessions, sometimes two will come to all sessions.

The course participants tended on average to be younger and better educated than the average for Australian farm operators (see Ferguson & Simpson, 1995 for a profile of the farm workforce). Fifty-five per cent of the farmers who did the course were 45 years or under and 29% had agricultural or other university level qualifications.

> The target group initially was ... top farmers who wanted to be really conscious of their land management, etc. I think that got up to the 5-10% of people who were going to use it, but we are now getting up a lot higher in that for people who want to do it, so I think we are just breaking into new ground and there doesn't seem to be a shortage of people wishing to do the course. (Whole Farm planning stakeholder)

Between 1988 and 1996 there were 40 courses run with a participation of 431. Of these, four were run on the Islands, six in the North East, thirteen in the North West, and seventeen in the South. The major types of enterprises that the participants were involved with included beef, sheep, dairying, horticulture, cropping and mixed.

Publicity procedures

The Whole Farm Planning courses are publicised in a number of ways including through the media and by word-of-mouth. There were advertisements in the rural newspaper Tas Country, on the ABC radio Country Hour, in brochures, magazines and on the TV. People who promoted the course include field officers, consultants, financial advisers, past participants and DPIF representatives at field days, seminars or discussion groups.

The then Tasmanian Development Authority (TDA, now Tasmanian Development and Resources) offered subsidies to eligible farmers through the Rural Adjustment Scheme to attend the Whole Farm Planning course. In some cases, TDA commercial loans would only be approved if a farmer did attend the course.

Another incentive used to attract participants to the Whole Farm Planning course is to let them attend the first session free of charge. Before attending this

session the DPIF sends out a letter, copy of the syllabus, a contact number, time and location of venue and a subsidy application form.

Methodology

Sample selection

There were six sample groups selected for interviews which gives a sample size of 59. These include:

a) Focus Groups (4+5+8+5+4)
b) Individual Participants (16)
c) Participants who did not complete (1)
d) Potential Participants (10)
e) Facilitators/ Presenters (4)
f) Stakeholders (2)

Sample selection for d) is made up of ten Tasmanian Farmers & Graziers Association members who have not attended any Whole Farm Planning courses (held between 1988 and 1996), but had a property in one of the five areas.

Sample selection for a) to c) is restricted to course participants between 1991 and 1993 for accuracy and ease of recall on questions about the course and changes made to farm management practice as a result of the course. A list of participants was supplied by the DPIF.

Sample selection for a) to c) is based on the number of participants attending the courses, the area they are from and the type of farming in which they are involved. See Table 2 and Table 3 for these details.

Table 2 Data used for sample selection of Whole Farm Planning courses

Main Product	Number of Participants		Area	Number of Participants	
Beef	128	21%	ISLANDS	39	9%
Sheep	210	35%	NORTH EAST	56	13%
Dairying	83	14%	NORTH WEST	145	34%
Horticulture	42	7%	SOUTH	191	44%
Cropping	69	11%			
Mixed	70	12%			

Table 3 Sample selection of the Whole Farm Planning course locations

Main Product	Area	Participants	Course Location	Year
Cropping	NE	9	Tamar Valley	1991
Dairying	N W	11	Smithton	1992
Sheep/Beef	S	11	Campbell Town	1993
Beef/ Horticulture	N W	11	Exeter	1993
Sheep/Mixed	S	10	Hamilton	1991
Total		52		

Sample b) is selected from these groups randomly and/or from those who could not attend the focus group interviews.

Only one participant in the five Whole Farm Planning courses attended more than the first session but did not complete the entire course (sample c)). There were no records of participants who had attended the first session but did not choose to register.

Sample e) consists of the facilitators of the original and current courses. Two presenters who were involved with two or more of the five courses were selected at random.

Sample f) are selected from the current Farmwi$e Consultative Group.

Response rate

The overall response rate was 92% of those eligible to be included. Of the 55 farmers selected for the sample, 7% either could not be contacted (not listed by Telecom, did not answer the phone or had moved) or were not eligible to be interviewed because they no longer farmed or were not involved in the decision making of a farm management unit. All the facilitators and stakeholders contacted agreed to participate in the survey. Response rates for each of the farmer sample groups are set out in Table 4.

Table 4 Farmer response rate - Whole Farm Planning

Selected Sample Group	Non-participants	WFP	Total
Interviewed	6	49	55
Refused or cancelled	1	4	5
Proportion of those selected and eligible who participated	*86%*	*92%*	*92%*
Ineligible	0	2	2
Not located	0	3	3
Proportion selected but ineligible or not located	*0%*	*9%*	*7%*

n=69

The interview procedure is set out in Appendix A. A sample of the interview instruments used in the case studies is in Appendix B.

Program effectiveness

All those who had participated in the Whole Farm Planning course were very enthusiastic about their learning experience. Even a participant who started the course but pulled out before the end was positive about the benefits he had derived. When asked "Do you use anything that you learnt at the program?" He replied:

> All the time [in my] day to day work. ... It was definitely a benefit to me. (Whole Farm Planning participant, course not completed)

Access to the course

Initial awareness

The first step in accessing any course is knowing it is available. The next step is then finding enough information to make an informed decision about whether to enrol.

The Whole Farm Planning course was advertised in the rural and local press and discussed on rural radio. The awareness campaign was highly successful, with all of the random sample of non-participant farmers interviewed having heard of the course.

Most participants became aware of the course through the press, mainly the rural press, but then went on to consult neighbours, friends and advisers, often those who had previously completed the course. About one half received information from the course provider, the Department of Primary Industries and Fisheries; in some cases a Department representative spoke to existing discussion or Landcare groups.

Table 5 Information sources consulted before enrolment

Information source	Individual interviews	Group interviews
Rural and local press, radio	17	4
Other farmers, advisers	16	5
Course provider	7	4
Total interviewed (includes one participant who did not complete course)	17	5

Factors which influenced enrolment

For the overwhelming majority (88%), the main reason for enrolling was to learn more about sustainability and planning issues. The opportunity for networking

was an incentive for many of the farmers who took the Whole Farm Planning course. When, where and how the course is delivered are also factors which influence the decision to enrol in the course.

Table 6 Factors which influenced enrolment

Factor	Number of individual interviewees	Number of group interviews
Wanted to know about course content	14 (88%)	4
Opportunity for interaction with other farmers	9 (56%)	3
Location or time of sessions	9 (56%)	3
Cost of course	2 (13%)	3

The following quotes are typical of the explanations farmers gave for deciding to enrol in the Whole Farm Planning course.

Course content

> I was looking at a more sustainable way to run the farm anyway; it was to do with the water and contouring and I was interested in the organic way of doing things. (Whole Farm Planning participant)
>
> The strategic approach to planning was really a bit new, and that was what we were interested in. It was the whole overview. (Whole Farm Planning participant)

Peer interaction

> [The] small group thing was good. The cost came into it, but it was within my expectations, that was OK, and the fact that it was in the evening. It was useful opportunity to talk with others, [and it] was another interesting thing to work with them, with what they were doing, and see what was happening. (Whole Farm Planning participant)
>
> Opportunity to interact with other participants, I found that to be an important reason to go. (Whole Farm Planning participant)

Location

> I suppose it was targeted at the farmers in my locality, so that was an influencing factor because it wouldn't have gone any further away because it was too far away as it was. (Whole Farm Planning participant)

The only one of the non-participant farmers interviewed who would like to do the Whole Farm Planning course said that his participation was subject to the course being held again in his locality.

'Try before you buy'

The opportunity to come along to the first session of the course before making a financial commitment was a factor in the decision to enrol for some:

> But we didn't really know exactly what the course was going to be like so, so we didn't know how much benefit it would be ... You could attend the first session and evaluate it before you had to commit yourself... (Whole Farm Management participant)

Reason given by those who did not attend

The reasons given by the six non-participant farmers interviewed for not enrolling were too busy, including busy with off-farm work, (3), not sufficiently interested (2) and too old (1). The prospective participant group were less likely to have agricultural or university qualifications than those farmers who participated in the program. This is consistent with Kilpatrick's (1996) Australia-wide study of farmer education and training which found that those with more education are more likely to participate in further education and training.

Delivery

Credible facilitators who were able to relate to the participants were important to the success of the course:

> On the theory side I guess the key was finding good Lecturers that could relate at the appropriate level (Whole Farm Planning facilitator)

Participant interaction during the course

The development of on-going support networks was facilitated by interaction between the farmers participating in the course. For many of the farmers, the interaction was the most, or one of the most, valuable features of the Whole Farm Planning course:

> The interaction with other participants was very good, and that's one of the things I enjoyed the most out of it. I found that very beneficial. (Whole Farm Planning participant)

Expert contacts

Getting to know experts who could be useful information sources in the future was a benefit to many.

> The other thing I found excellent was that we had a healthy mixture of speakers. It made the DPI a real entity. I could go in there and you

just might see someone you know now. (Whole Farm Planning participant)

Changes to practice

All but one of the participants interviewed had made at least one change to their farming practice (including financial management) that was influenced by the course. The most frequently mentioned new or changed practices were using land capability information (mapping and soil management) in selecting uses for parts of the property and other farm decisions, and changes to property layout (fencing, cell grazing and stock laneways). Three quarters of all participants have either used or plan to use land capability mapping in farm planning and decision making.

The proportion of participants who had already made changes on their farms, as well as those who have definite plans for changes, are shown in Table 7.

Table 7 Changes made and planned by Whole Farm Planning Course participants

	Changes made		Changes planned	
Change	**Individual interviews**	**Group interviews**	**Individual interviews**	**Group interviews**
Land capability mapping, soil management, farm plan	9 (56%)	3	3 (19%)	1
Property layout	7 (44%)	2	2 (13%)	1
Planting shelter belts and trees	3 (19%)	4	6 (38%)	3
Water management (storage, drainage)	4 (25%)	2	6 (38%)	
Fencing off rivers or remnant bush	5 (31%)			
Tillage, planting	2 (13%)	1		
Minimise chemical use or more efficient fertiliser use	4 (25%)		2 (13%)	
Budgeting, risk management, business plan	3 (19%)			
Other	3 (19%)		3 (19%)	
Total who made a change	**15 of 16 interviewed (94%)**	**All 5 groups**		

Farm planning and land capability mapping

These quotes illustrate how land capability mapping altered the way most of the participants make decisions on their farms:

> The land capability thing was a really good concept. That is something I plan to use. I have changed my outlook on what I want

to do with the farm through the Whole Farm Planning. (Whole Farm Planning participant)

The planning ... I'm setting up a new infrastructure on our property and that has certainly given me the tool to go ahead to use those things to do that better, where I may have just done it on the back of a piece of paper or I wouldn't have used the overlays or whatever. (Whole Farm Planning participant)

I have seen the results of a lot of people post Whole Farm Planning course. They might not implement their plan to the full. They may not implement the plan as they desire but the point is it has stimulated those participants to start thinking about their farm as a unit. (Whole Farm Planning facilitator)

Confidence

The course made farmers feel confident enough to go ahead and make changes to their farming practice:

I suppose one was receptive but didn't have the confidence to make the changes and to be given the confidence to consider the changes I think that is probably one of the things [outcomes of the course]. (Whole Farm Planning participant)

Planned and possible changes

Most of those interviewed planned further changes on their farms. The areas identified for future changes were similar to the areas where other farmers had already made changes to practice:

We could spend more money on water catchments, better water catchments ... what it means to us that we could irrigate if we wanted to, we could also spend more money on fencing more of those areas off, that's probably the key thing... (Whole Farm Planning participant)

A bit more tree planting, ... a fair bit more fencing; a bit more fencing contours rather than traditionally up and down. (Whole Farm Planning participant)

Results

Many of the participants reported measurable results from the course-influenced changes which they had made. Others were unable to separate the impact of the course-influenced changes from other changes which were occurring on the farm and/or in the marketplace for their product. The results of changes which were reported fell into three categories: sustainability, financial or productivity gain and reduced workload or improved time management.

Table 8 below summarises farmers' perceptions of the results of the changes they have already made on their farms following the Whole farm Planning course.

Table 8 Results of changes on farms influenced by the Whole Farm Planning course

Result of change	Number of individual interviews	Number of group interviews
Improved sustainability	14 (88%)	5
Financial or productivity gain	11 (69%)	4
Reduced workload or improved time management	6 (38%)	3
Total interviews	**16**	**5**

The benefits identified by the farmers from the changes they had made are illustrated by the following quotes:

Sustainability

> The benefits that I could see were more sustainable feed production, more drought tolerancing... (Whole Farm Planning participant)
>
> The drainage we did earlier was beneficial. What we are doing is humping and hollowing. We can run more animals on top of the ground and things that live in the ground, they are going to be healthy too. (Whole Farm Planning participant)

Productivity

> I have lifted my productivity a 100% since I did the course. I am quite sure that the course has got some influence on that 100% increase. (Whole Farm Planning participant)
>
> We are growing more grass on the same acreage. We have got production up, production is going up every year. (Whole Farm Planning participant)

Financial gain or survival

> Well definitely on the dairy farm we thought there was [measurable financial gain] with the changing of the fertiliser application. (Whole Farm Planning participant)
>
> Better targeting and better usage of those resources, fertiliser, and animal health products; they do work well and they give you a financial benefit as well as giving ... a better result. (Whole Farm Planning participant)

> I don't believe that we could of began to make a viable living without implementing some of these things. (Whole Farm Planning participant)

Workload

The knowledge and skills gained from the course allowed some farmers to reduce their workload:

> The management is much easier, we just have to spend a little time now to shift the stock. (Whole Farm Planning participant)

Benefits to communities and catchments

As well as benefits on individual properties, there were benefits to catchment areas that flowed directly from the Whole Farm Planning course.

> In the short term I have become more aware of landcare and quite involved with our landcare group. And you know, we've applied for landcare funds and fenced off remnant bush and done things that we may not have done quite so quickly had I not gone to the course ... (Whole Farm Planning participant)

> Consideration of wider implications and the catchment, I take those into consideration. (Whole Farm Planning participant)

On-going networks

The Whole Farm Planning course was particularly successful in establishing on-going support networks amongst its participants, networks which were still functioning up to three years after the group had completed their Whole Farm Planning course.

> I guess you sort of made friends that you still have through the network. Definitely our networks are still retained, some of those throughout the course and [the course] certainly generated others. (Whole Farm Planning participant)

Networks and contacts are regarded by many as one of the most important things gained from the course.

> That is one thing that I learnt, if you don't have the knowledge, where do you go and find it. ... Who the best contacts are ... you go out and find out who made the mistakes first and learn by them rather than your own. (Whole Farm Planning participant)

> By having the plan and the overlays for the original farm map that there always was. You... make meanirgful decisions that you wouldn't have done otherwise. (Whole Farm Planning participant)

Encouraging lifelong learning

For some, the course was the start of an on-going learning process:

> Doing the course was the beginning of the awakening I suppose I could say in our whole business planning with my wife and I. Setting up here and the further education we have done using a consultant, that has probably been the next step on from the Whole Farm Plan course. (Whole Farm Planning participant)

Even when people were already aware of possible practices covered in the course, the Whole Farm Planning course played a role in motivating them to actually implement new practices.

> I think after doing a Whole Farm Planning Course it certainly gives you a burst of enthusiasm and you go home and get stuck into a few of these issues that may not have been tackled if you hadn't done the course. You may have been aware of it, but it is a motivation. It certainly motivates people for short period of time at least to get out and do some of these things that they have learnt in the course. (Whole Farm Planning participant)

Attitude change

The Whole Farm Planning course was particularly effective in bringing about attitude change, for example in relation to planning and environmentally sustainable farming practices, as the following quotes illustrate. Attitude change is necessary before there is a decision to make actual changes to practice (Kilpatrick, 1996).

> Well, I just thought to ask "why" rather than "why not" all the time. Yeah, you don't put up the barrier in your mind all the time. (Whole Farm Planning participant)

> Since our course, everything you do, there is something in there that came out of this course that comes into your mind. ... it is a philosophy that you learn. ... it is just that philosophy of how you would approach the problem. (Whole Farm Planning participant)

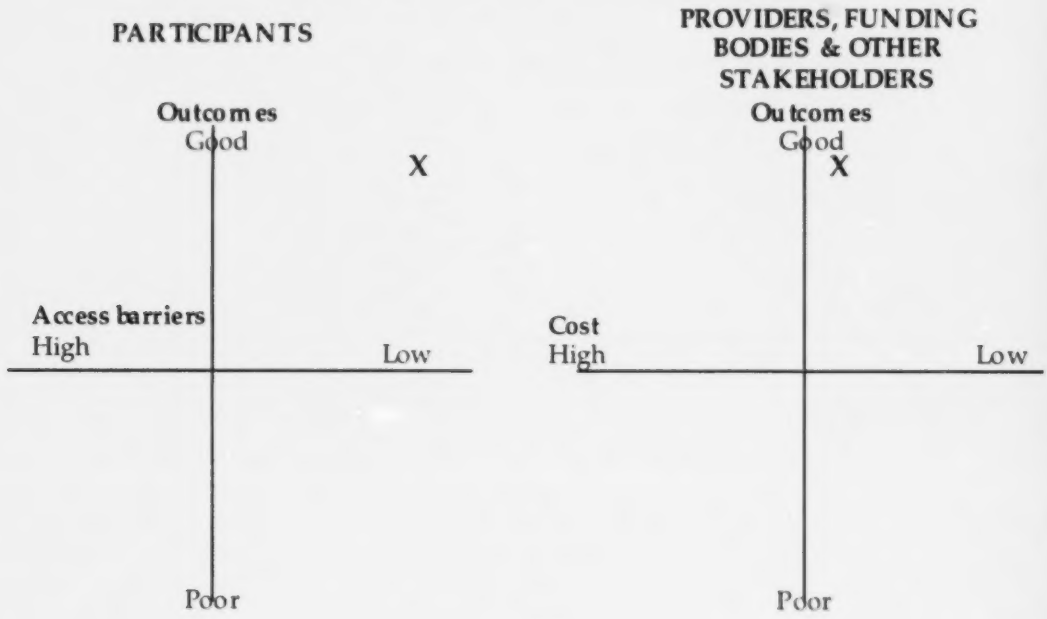
> Just the general or the attitude change, that you don't just sort of rush out in the morning and do something for the sake of doing something. There has to be more thought given to it. (Whole Farm Planning participant)

> There has been a terrific attitude change. Actual things happening on the ground I would say must be fairly disappointing. But also take into account drought, price crash, all of those sorts of things have an impact. (Whole Farm Planning facilitator)

Cost effectiveness grid

Note: This is an attempt to synthesise all the data obtained about the program. The grid should next be tested on program participants, providers and other stakeholders.

Whole Farm Planning course cost effectiveness grid



The Whole Farm Planning course rates highly on both cost effectiveness grids. Participants benefit from a partial subsidy of the cost of the course, and so have lower access barriers than would be the case if they bore the full program cost. Publicity was highly effective in reaching the target audience, the delivery location in small rural centres according to demand and the adult learner centred style of delivery also contribute to low access barriers.

The program involves relatively low fixed costs, with a small full time staff supplemented by a range of expert facilitators on a needs basis. Use of country halls and clubs for sessions means there is no expensive teaching facility to maintain.

Outcomes reported by participants, facilitators and other stakeholders suggest that the course has been highly successful in developing networks and bringing about attitude and practice change. These changes have resulted in improved sustainability, productivity and/or profitability for a large proportion of the participants. The whole community benefits from many of the changes; for example changes which improve water catchments and changes which make farms more financially sustainable.

DAIRY FARM MANAGEMENT CERTIFICATE

Background

Objectives

The Dairy Farm Management course aims to:

> provide training in the skills and knowledge required for the operation and management of a dairy farm. The course is designed for current dairy farm managers or for experienced farm employees who intend making a career in dairy farming. (North West Institute of TAFE, Dairy Farm Management leaflet)

The Dairy Farm Management Certificate is an Australian Qualifications Framework (AQF) level 4 course provided by the North West Institute of TAFE. The course runs annually in one or more different locations in dairy farming areas of Tasmania. In 1995, the North West Institute of TAFE obtained funding for a special women-only offering of the course through the Commonwealth Access & Equity funding program. The women-only course was held at Smithton, the regional centre of a predominantly dairy farming area in the far north west of Tasmania.

Course details

In 1995, the Dairy Farm Management course for women ran for four hours a day, between 10:00am and 2:00pm on two days a week from 21st June to 30th November. There was a ten week break for calving between 27th July and 4th October. These dates and times were negotiated with the women. A church building in Smithton was used as the venue for the course, instead of the TAFE Institute Annex, because it had suitable facilities for setting up child care, which was provided at a small extra cost.

The topics covered in the course were nutrition, feed, stocking rates, irrigation, drainage, pasture production, breeding, animal health, calf management, record keeping, financial management, labour management, time management and industrial issues.

Publicity procedures

The Women's Training Consultant for the North West Institute of TAFE asked for referrals for the course from a Tasmanian Farmers & Graziers Association Dairy Councillor who had regular contact with dairy farmers in the Circular Head area. A pamphlet advertising the possibility of running a Dairy Farm Management course for women only was sent directly to the referrals. It included the details about an information day which was held prior to running the course.

The course was also advertised in the local newspaper, the Circular Head Chronicle.

Methodology

Sample Selection

Six sample groups were selected for interview, which gave a sample size of 27. These include:

[a] Focus groups (2 of 5 and 4 people)
[b] Individual participants (4)
[c] Participants who did not complete (3)
[d] Potential participants (4)
[e] Facilitators and presenters (5)
[f] Stakeholders (2)

The sample selected for [a] was all those participants who agreed to take part in focus group interviews.

Sample [b] & [c] were chosen randomly from the lists of enrolled and withdrawn participants respectively which were supplied by the North West Institute of TAFE.

The sample [d] was made up of four women who lived on dairy farms in the area and did not attend the course. Their names were given by the TFGA Dairy Councillor.

Sample [e] was two facilitators and three presenters selected at random.

Sample [f] was selected from North West Institute of TAFE staff.

Response rate

The overall response rate was 71%. Of the 38 people selected for the sample, all were eligible to be interviewed. Response rates for each sample group are set out in Table 9.

Table 9 Response rate - Dairy Management

Selected Sample Group	Number
Interviewed	27
Refused or cancelled	11
Proportion of those selected and eligible who participated	*71%*
Ineligible	0
Not located	0
Proportion of those selected but ineligible or not located	*0%*

n=38

Program effectiveness

Access

How they found out about the course

The focus groups and individual interviews revealed that most participants had received a letter about the course from TAFE. Two had first become aware of the course in phone calls from friends and one had first seen an advertisement in the local newspaper.

Others consulted before enrolment

As for all the case study programs, the women consulted other sources before deciding to enrol. Some rang the TAFE Institute and spoke to the program manager who answered questions and sent further information in mail. Many went to the pre-enrolment information session about course.

Reasons for enrolling

Many young families have moved into the Circular Head area to invest in dairy farming. They do not have family support nearby for child care, and child care is not readily available in the area. Several members of both focus groups and one of the individual interviewees stressed that the provision of child care allowed them to attend the course.

> As a mum, one of the important things that prevents me or helps me do a course, is child care. In the country, to get your child into child care in town, you have got to book them in ahead. Often in the country you can't do that, you know, you are called upon today to help drench the calves and you had your kid booked in because you thought you were going shopping. You just don't do it. ... like the CROP course interested me, but then I thought no, the child care thing is going to get in the way. (Dairy Management participant)

Because the course was subsidised by the Access & Equity funding, the course fee was very little compared to the usual charge of $250 for the Dairy Farm Management Certificate. The low cost was a influencing factor on the decision to enrol for some of the women:

> The fact that I didn't have to pay a heap of money was a help to us, particularly coming out of the drought. (Dairy Management participant)

Content

For a number of the women, the chance to find out more about dairy farming was a motivating factor. One of the focus groups estimated that about 70% of people who did the course were new to dairying, or about to take over new farms. Some wanted to become more active and effective partners in their farms, others

came so they could better understand their husbands' work: Many were encouraged by their husbands:

> My husband encouraged it because he said I would get a better idea of what he is doing. (Dairy Management participant)

> I don't come from a dairy background, [I] married a dairy farmer. This is our first year share farming. (Dairy Management participant)

Location, venue and time of sessions

The Women's Programs Co-ordinator at the TAFE Institute summed up the way this course allowed the women dairy farmers to access relevant education:

> As a women's program the benefit was that we met the needs of the client group, and that we took it to them, in the time frame and the place that was available to them. Had it not been held there, in the way that it was held, they would not have been able to participate. (Dairy Management course provider)

Delivery

Interaction with other participants

The course co-ordinator aimed to encourage as much interaction between course participants as possible, by creating a non threatening environment:

> Because of the supportive environment that we build, they were able to be very open with each other, and it is not a critical, threatening situation. Often, if you are working with industries, often there is a competitive element in there. But what actually happened, and frequently happens with women's groups, is that once that initial nervousness is got out of the way, there is an openness and an honesty. The benefit is that they shared those experiences and the rationale for their thoughts and they rubbed off on each other. (Dairy Management course provider)

> The style of it was we basically sat around and talked, and I think that them sharing their ideas, bouncing their experiences off each other is always really well-received. I don't think it matters where you go, people seem to get a lot out of that. (Dairy Management facilitator)

This selection of comments from the participants shows how much the women learnt from interacting with each other in the group:

> You are learning just as much probably [from other participants]. You will be amazed by how much you actually know, too. (Dairy Management participant)

> Somebody would say something and we'd have big debate on it. It was good because we learnt as much from each other as we learnt from [the facilitators]. It was excellent because it wasn't like fifty people in the class. There was only like fourteen or eighteen. We all got to know each other really well. (Dairy Management participant)
>
> ... options, things that you hear other people discuss. It might not be the way we are doing it but I take it home ... And sometimes there is a good idea there that we have been able to say, yeah maybe we'll try that next year ... (Dairy Management participant)

The list of things which the women said they learnt about from each other is varied:

- winter milking
- problems with feeding grain in the winter
- issues in increasing herd size
- ways of funding farms.
- drugs to try for mastitis.

Facilitators

The participants were very positive about the delivery style of the facilitators, and the interactive environment which was created:

> The people that they had coming in were pretty good really; the lecturers were throwing their ideas around. I sort of liked the debating. I like to get involved. (Dairy Management participant)
>
> [The co-ordinator] was what I liked most because he was most enthusiastic... He got everyone involved. (Dairy Management participant)

Women only course

Most of the six facilitators and other TAFE Institute representatives interviewed mentioned the open nature of the women-only group, and the high quality of the learning which took place through participant interaction.

> ... because it was an all-women's program they'd be more comfortable in sharing ideas, stating their opinions, talking, swapping ideas. I believe it was more open [than the mixed groups], they'd have more chance to talk, express their opinions, share their knowledge. (Dairy Management facilitator)

Only one facilitator disagreed, and thought that a mixed group to interacts more:

> In the mixed group there was a tendency for the farm family - for one of them to look at a question in one way and another to look at

> it in another way. I thought that that added to better interaction. (Dairy Management facilitator)

Many of the women enjoyed the women only composition of the group. They feel comfortable asking questions that may have displayed ignorance:

> We can be open, because we are very open. We don't want the men next to us nudging us to say shut up... If it had been a mixed group, the men would just dominate it against us. ... I think we didn't mind being ignorant with each other after a little while. It took a little time I think to even for us to say "I don't understand, what's that mean? I don't do that". (Dairy Management participants)

> I actually did the dairy farm management course in 1989 with my husband. ... And I remember a guy from the Artificial Insemination Centre came down to talk and I came out with obviously something that was sort of stupid and they laughed. I mean he had a grin on his face and he drew a little diagram and explained it, but it just cracked the men up that this silly woman that didn't know that. (Dairy Management participant)

Practical/theory blend

The women liked the practical, hands on parts of the program, which included two field trips (with the children):

> The fact that you can go out on the farm and you can walk around somebody else's farm and see what they do. It is stimulating. (Dairy Management participant)

> The very first day he [the facilitator] walked in with this big heap of grass. And dumped them down and I thought this is the right course. You don't get your hands dirty doing the other course. And I appreciated all of that, because farming is very much a hands on thing. (Dairy Management participant)

Assessment

Assessment in this course was very low key. The participants received a Certificate if they attended most of the sessions. The facilitators were satisfied from in-class feedback that learning outcomes had been achieved:

> I think this has got to be one of those informal courses where, whilst they get a piece of paper at the end of it, it's how much they personally want to go away and take with them [that is their assessment]. (Dairy Management facilitator)

Suggested improvements to course

The only improvement was mentioned by both participants and facilitators. They suggested that the course should have started earlier in the year so that it finished before the busy calving season, and so that it could have been held on only one day a week instead of two days.

Changes to knowledge, skills and attitudes

The women mentioned a number of specific areas where they believed their knowledge and skills had improved:

- becaming aware of potential pitfalls of larger herds
- artificial insemination
- natural pasture seeding
- inductions and synchronising cows
- getting cows healthy and feeding them pellets before Artificial Insemination.
- having separate financial records for each enterprise, e.g. dairy, beef.
- grass management.

The process from new knowledge and skills and attitudes to changes on the farm

The women were all partners on dairy farms and there had to be agreement with husbands and sometimes fathers-in-law before a new process was implemented. Several reported arguments or discussions with husbands who liked to do things "as his father did". Others had husbands who were more open to the ideas their wives brought home:

> I take it home and I tell the hubby, he has picked my brain. I think he has learnt as much as me. And sometimes there is a good idea there that we have been able to say, yeah maybe we'll try that next year. (Dairy Management participant)

Changes that have been made

Most of those in the focus groups and all the individual interviewees had made some changes on their farms which were influenced by the course. Here are examples of the sorts of changes to practice which they have made:

Artificial insemination practices

> Breeding and mating .... before I was just grabbing a bull wherever I could. Now I have got my own ... now I know roughly their calving dates. (Dairy Management participant)

Calving:

> I have referred back to my notes on various occasions particularly with calving, and if something happens I think oh yes we studied that... (Dairy Management participant who did not complete course)

Financial records, books and bank statement reconciliation:

> Well I took what we did last week home thinking he might not be impressed with this and I actually sat down and did our books for last month in the way that we had been taught last week, just as an experiment thing. Reconciled bank statements, the whole works, I also did it the old way that I used to do it. I showed it to hubby, he looked at it, he said "Oh that's really good", he said, yes, he said, we could do that all the time. I was floored. He said I had been trying to work out a way to do that for a while he said, and I just couldn't work it out, he said, but he said, no that's good. So I was happy. (Dairy Management participant)

> We sold 8 cash books to people who were on the course, and in fact three of them were actually going home to re-do them [their books]. So I can only say that that's the way we gauge our success. (Dairy Management facilitator)

Pasture management:

> I have learnt more on pasture management now than what I did before. I used to run out a lot before. Now it is a lot easier. .... I really got a lot out of the pasture production. (Dairy Management participant)

Other changes were growing turnips, changes to feeding and nutrition and new machinery purchased using knowledge from the course.

Some of the women started to make changes on their farms soon after they started the course:

> [I started to make changes as] soon as we started the course. Some of them I did as soon as I understood the grasses. I starting keeping beef (I run the beef flock), I started a three day rotation in each paddock and then off I went from there. (Dairy Management participant)

Confidence to implement changes

The barriers identified by the women to implementing things they have learnt were money and time. There was a general feeling of confidence in their ability to put the knowledge and skills they had learnt on the course into practice.

> I have always been worried about things that would happen or go wrong, having to ask somebody; I would feel like a real Charlie or something, but now that wouldn't worry me. (Dairy Management participant)

> And I said, "if you died, Marty ,.. I know for certain that if I appointed a manager or a share farmer I would be able to be confident with checking up on him saying what are you doing there, why are you doing it, and if he tried to bluff me, and say that he was doing it for something else and I knew that he wasn't, I would be confident in handling the farm. (Dairy Management participant)

> And so you can learn that you can stand by your own assessments. I put in turnips, I was the first person put in turnips. There must be seven crops in up my area now. (Dairy Management participant)

> We have got a young worker, and he was down getting the calves in one day and he said "okay boss, what do we do next?" I looked at him and said "I don't know, you know more than me". And he thought that was a big joke but at least now, if he said that to me, I will be telling him what we are going to do. (Dairy Management participant)

Benefits to the farm business from the changes

Those interviewed six to eight months after the course finished reported benefits from the changes they had made. Improved pasture management had allowed a higher stocking rate on one farm. Another participant reported that the health of her animals had improved.

The women predicted other benefits from changes already made, but for which it was too soon to see any measurable benefit. They anticipated saving time and money on vets bills from synchronised calving, as well as less stress because of having to be on 'stand by' for birth problems over a shorter period.

Other benefits

A better understanding of the farm as a whole system:

> That's what this sort of course does, it just opens your mind up to what you should start thinking about. If you're just only worried about your grass and then after a while, well, you worry about the soil and stuff. So it really is just to open your mind up and gives you directions to try. (Dairy Management participant)

> Well, now I know a lot more about I know a lot more what's going on dairy at home but I didn't know before. Having been a dairy farmer only, I married a dairy farmer 7 years ago, so that's fine. So I had my role to play in that. Now I see his role as well. I see the whole farm role as well. I see where we are heading and how everyone else funds their farms and what their goals are and some of it is achievable. (Dairy Management participant)

Now able to understand and contribute to discussions and decisions about the farm:

> I can go off to a discussion group and I do know what they are actually talking about. It is not going over my head now as much as it used to. (Dairy Management participant)

A representative of the TAFE Institute explained how the benefits of the course extended into the wider farming community through discussion with their farming partners and further interaction in the broader dairying community:

> The women are now seeing themselves, and the families are now seeing themselves, more as professional partners. It is really interesting how that flowed on, because they would go and discuss things with their husbands and their partners, and sometimes there is a bit of resistance and others were really keen. But always, always there was some change. Or they would look at things and reject it, say "No, that's not the way it should be done" or whatever. It flowed on, I think, to the whole farming community as well. (Dairy Management course provider)

Further training

The women identified several topics on which they would like further training sessions. They were:

- animal health, especially calf diseases
- occupational health and farm safety, especially for men, e.g. effect of chemicals on human fertility, avoiding back strain
- field trips and looking at dairies on farms
- rural taxation
- what to look for in buying a dairy farm
- cow scoring - practical session with a chance to try cow scoring.

Delivery cost issues

Although many appreciated the low cost of the course, there was a higher 'drop out' rate than for mixed gender offerings of the course, which are not subsidised:

> Once they [usual course participants] pay the $250 there is a commitment. ... while we had a group of a dozen that had been very committed, we have lost a dozen and more. (Dairy Management facilitator)

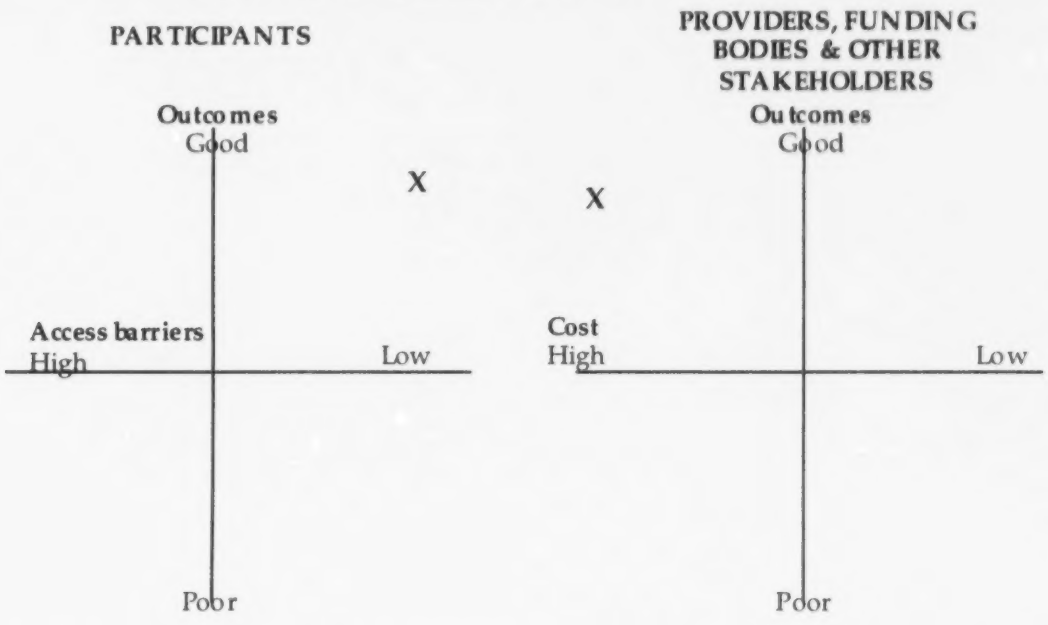
> We had to take out an extra public indemnity insurance which was expensive, and then we had to hire suitable premises. ... We can provide this sort of service, but at what cost? And then the next thing is, if this program has cost x amount of dollars, how do you justify that with your student contact hours?... It is a big dilemma for

delivering programs out in the field [away from the main TAFE campuses] and on flexible deliveries, how do you resource them adequately? (Dairy management course provider)

Cost effectiveness grid

Note: This is an attempt to synthesise all the data obtained about the program. The grid should next be tested on program participants, providers and other stakeholders.

Dairy Farm Management Certificate cost effectiveness grid



The Dairy Farm Management Certificate was very cost effective for participants. The cost of the course was heavily subsidised with access and equity funding, child care was provided, the course was held near where the women lived and worked, publicity was effective in reaching the target audience, the content was regarded as highly relevant and session times were negotiated to suit participants. These factors mean the access barriers were extremely low.

Many of the factors which contributed to the low access barriers for participants were reflected in a high cost for the provider and funding bodies, who met nearly the whole cost of the course and spend many hours arranging child care and finding suitable premises for the sessions.

Outcomes for both groups were very good. Many of the women reported increased confidence as farmers and a large proportion pointed to improved practices on their farms resulting from the course. The provider succeeded in attracting the target audience into the program. The facilitators and the course as a whole were rated highly by the participants.

FARM BEST PRACTICE PROGRAM

Background

The Farm Best Practice program was established in 1993 as an initiative of the Tasmanian Agrifood Consultative Group which comprised representatives of the Commonwealth Department of Primary Industries and Energy, vegetable growers, vegetable processors, trade unions, the Tasmanian Department of Primary Industries and Fisheries and the state development authority, Tasmania, Development and Resources. Funding was initially from one vegetable processing company and the Commonwealth and State governments. The main focus of the program was the improvement of the Tasmanian potato industry and its potential for exports. The program was based on small local groups of growers who worked with facilitators to identify crop problem areas and access the latest technology (Medwin, 1993).

The Farm Best Practice program was run by the Department of Primary Industries and Fisheries Tasmania (DPIF). The vegetable processing company involved was sold around the time the interviews for this case study were conducted, and the new owner has withdrawn support from the program.

Initially 25 groups were established, and subsequent amalgamations resulted in around 20 continuing groups. Groups were each run by a facilitator from the DPIF in local venues such as halls and hotels, with some field trips to properties in the local area. Sessions were held either in the early afternoon or in the evening. The DPIF reports that the level of activity varied considerably from group to group.

The program concentrated on technical aspects of production in its first year. Topics included seed selection, planting, crop management and harvesting. Sessions were scheduled to coincide with the various stages of the production cycle. Later, the scope of the program expanded to include benchmarking by collecting participant details on costs and yields.

Methodology

Some groups were identified as being more active than others by the program co-ordinator. Three participants from each of three active groups and three from each of three less active groups were selected for individual face-to-face interviews. Eight people who had been active participants in the program, but had discontinued and fifteen who had attended no sessions, or only one session, were interviewed by telephone. Three facilitators, a processing company representative, one industry organisation representative and a senior DPIF representative were also interviewed.

Program effectiveness

Access

Information and decision support

All producers in an area were mailed a brochure and invitation to participate. There was also a media campaign in the rural press and on rural radio. The awareness campaign was successful; all but one of the non-participant target group of potato growers who were surveyed had heard of the program.

As discussed in the body of the report, most consulted with peers (other farmers) and/or the DPIF before deciding to join the program, as Table 10 shows.

Table 10 Information sources consulted before joining the Farm Best Practice Program

Source	Number (% of those who joined)
Rural media	12 (36%)
Other farmers or family	12 (36%)
Program provider (DPIF)	9 (27%)

Note: this table includes responses from some who came to only one session.

Reasons for participating

Of those that were, or had been, active participants in the program, half said that the main reason they decided to join was for the new knowledge and skills relevant to potato production that they expected to acquire from the facilitators. For others, the opportunity to learn from, or share ideas with, other farmers was the main reason for participating:

> It was just perhaps a way I could measure what I was doing against other farmers in the district. (Farm Best Practice participant)

Table 11 Reasons for joining the Farm Best Practice Program

Reason	Number (% of those who participated)
Knowledge and skills from facilitators	9 (50%)
Improve crop yield	5 (15%)
Share ideas with other farmers	5 (15%)
Suitable session times or location	3 (9%)
Other	3 (9%)

Note: this table includes only the 18 farmers who were or had been active participants. They were able to give more than one reason for joining the program.

Reasons for not participating

Farmers must be convinced that the program will deliver knowledge and skills which they can use on their own farms, in a way which is non threatening. They

must value the potential improvements to their farm business above the value of other uses of their time:

> It comes back to the growers' attitude I suppose. A lot of growers think that unless they're sitting on a tractor they are not making any money, whereas they don't look at the agro/economic side of growing potatoes... (Farm Best Practice stakeholder)

Although they were aware that the program existed, many of those who had not been active participants were not able to give a particular reason for not becoming involved. Time of the sessions and non-relevant content were the most frequently cited reasons for discontinuing with the program, or not starting.

Table 12 Reasons for not joining or discontinuing with the Farm Best Practice Program

Reason	Number of those interviewed who were not active participants
Content not relevant to me	5
Time of sessions	5
Lack of time	4
Delivery style	2
Other	2
No reason given	12

Note: this table includes 24 farmers who had been active participant, and had discontinued, and 15 who had never been active participants. They were able to give more than one reason.

Delivery

Location and venue

While most were happy with the location of the program sessions, there were many negative comments on their timing from those who discontinued with program, and from some of those who persisted with it. The time of sessions was a reason given by two of the target group for not becoming involved, and by three of those who discontinued:

> They usually have them [sessions] late in the afternoon and also I being a Dairy Farmer I am occupied at that time. (Farm Best Practice target group farmer)

> Timing was an important factor... that was one of the reasons I dropped out. I work away from the farm as well and I have shorter time... It was half way through the day and I couldn't get going onto another job. (Discontinued Farm Best Practice participant)

The venues suited the participants, who felt comfortable with their 'non training room' nature:

> Our sessions were conducted anywhere that was suited. They didn't have to go home and change; we took one another as we were. (Farm Best Practice participant)

> The delivery mode is OK because they are small groups and good venues [in] which farmers are comfortable. (Farm Best Practice participant)

Farmers need to respect the facilitators, and perceive that they are able to provide knowledge and skills which will be applicable to their own farms. Those farmers who do not expect this will not participate:

> I have heard some farmers who have been to those things [Farm Best Practice sessions], and they have felt these people who do not farm, who probably couldn't grow a potato if they tried, are telling people what to do from the theory. (non-participating farmer)

Content

Farmers will only attend a program if the information provided is relevant to their needs. Half the farmers joined the program for 'content', or knowledge and skills which they could use. Five of the nine farmers who ceased to participate did so because they believed that content of the sessions was not relevant to their needs:

> We were getting information at each sitting that was three, four years old. (Former Farm Best Practice participant)

> Really they were going onto a lot of things that people already knew. (Former Farm Best Practice participant)

Negotiation with the target group

Farmers prefer to be involved in establishing the topics of training programs, and the timing of sessions. Lack of negotiation caused this farmer to discontinue with the program:

> They just send you out a letter, but there was no way putting ideas forward that I could find. You took what you were given and that was it. Just a note would show up here that so and so field day would be on at 2pm in the afternoon or something; if you are interested, [then] front. (Former Farm Best Practice participant)

Peer interaction

Two thirds of the participants stated that the interaction between members of the group was the best or one of the best aspects of the program, and that this interaction contributed to their learning experience. The facilitators also commented favourably on level and nature of participant interaction in many of the groups:

We do learn from others because there was always one or two of the group who were a bit more conscious of some of things that were being pointed out. We learnt from each other for sure. (Farm Best Practice participant)

Probably [the most useful thing about the program was] learning from others, the interaction between the growers which I felt was excellent ... there were growers who I thought were very efficient growers; seeing ideas that they were running off with, things that I hadn't thought of before, and vice versa. (Farm Best Practice participant)

The best thing about it [the program] was walking around other people's paddock... and hearing what they had to say. (Farm Best Practice participant)

The interaction was good. It was very interesting to see the group dynamics change with time. ...they enjoyed coming along and talking to one another, there was a lot of information exchanged both before and after the meeting. (Farm Best Practice facilitator)

Facilitators

There were mixed comments about the facilitators. While three expressed a view that the facilitators lacked depth of knowledge or had poor delivery techniques, another three participants were very pleased with their program facilitator, as this comment illustrates:

He put a lot of work into it, [was] enthusiastic about farmers' interest. He went beyond what I thought was expected, which was good. The content was determined by the farmers, then [the facilitator] would go and source the best deal with what their queries were about. (Farm Best Practice participant)

On farm outcomes

All but two of the currently active participants had made at least one change to their farming practice which was attributed to the program, as had two of those who were no longer active. As well, two farmers had planned changes. Most of the changes related to planting, especially plant density.

Table 13 On farm changes attributed to the Farm Best Practice Program

Change	Number of farmers making change (% of ever-active participants)
Plant density	4 (22%)
Irrigation or drainage	3 (17%)
Fertiliser or pesticide use	3 (17%)
Seed selection, storage	2 (11%)
Hygiene practices	1 (6%)
Communication with contractor	1 (6%)
Soil tests	1 (6%)
No change	8 (44%)

Note: This table includes responses from 9 active participants and 9 formerly active participants. Many had made more than one change.

Even when they were unable to identify specific changes attributable to the program, participants still claimed to use the knowledge and skills gained:

> You learn little bits, then 6 months later you might find the answer to your questions in your head it may well it came from one of these meetings. (Farm Best Practice participant)

Results

All those still actively involved in the program who had made some change attributable to the program reported some positive results.

> Improved product quality has been a key factor in terms of consistent improvements; increased profit and production, which goes with profit usually, and the various savings like labour savings and communication and mechanisms; that's sharing ideas, access to advice, all in that area ... up to a point I think we achieved or we are achieving all the[se] suggested benefits. (Farm Best Practice participant)

> With the improvement of all the little changes that were implemented it made a difference between just breaking even and showing a bit more profit. (Farm Best Practice participant)

Most who had made changes reported that the changes had impacted on farm performance by increasing yield, quality or profit. The positive results reported by the farmers are summarised in Table 14 below.

Table 14 Positive results reported from Farm Best Practice changes

Result	Number reporting result
Improved yield	4
Increased profit	3
Increased quality of product	3
Better environmental sustainability	3
Reduced labour time required	3
Reduced costs	2

Seven currently active participants had made changes, and answered this question. They were able to give more than one response.

One farmer experienced adverse results from changes:

> The two biggest things that cost us money were teaching us to cut our seed bigger, which was costing us a lot more money. And ... the tensiometers were supposed to be monitoring the moisture and they just never worked. We just had to irrigate ... a lot more than the tensiometers was telling us. (Farm Best Practice participant)

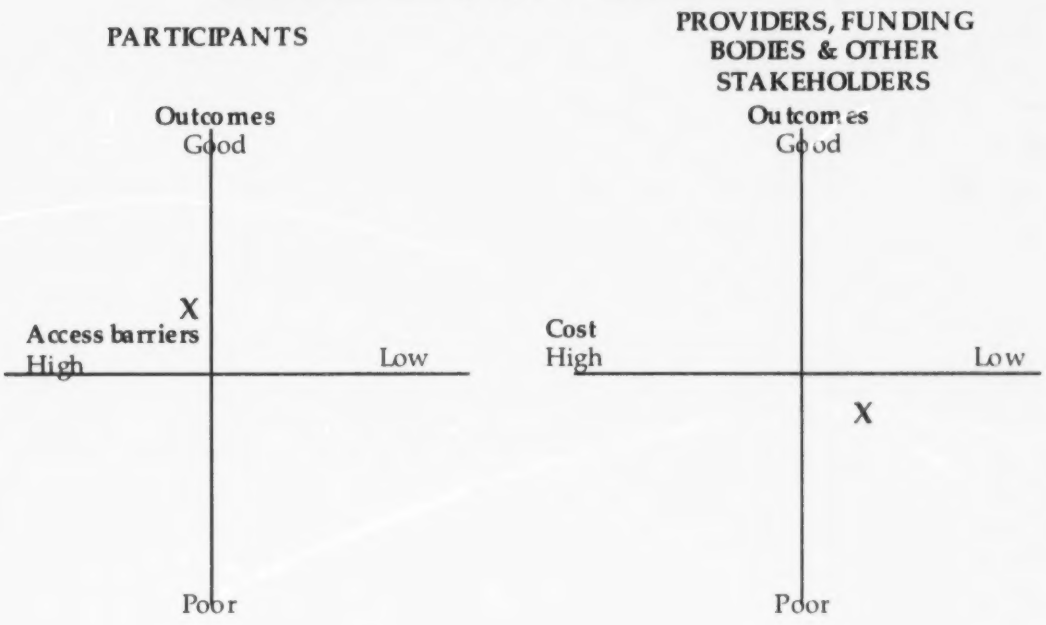
The processing company did not achieve the expected results.

> I guess the company didn't achieve what were in the goals, that was the 20 20 [reduction in costs and increase in production]. I suppose from the company point of view it wasn't successful. (FBP company)

Cost effectiveness grid

Note: This is an attempt to synthesise all the data obtained about the program. The grid should next be tested on program participants, providers and other stakeholders.

Farm Best Practice program cost effectiveness grid



The access barriers for participants in this program were slightly higher than might be expected. One of the factors which contributed to this was the perception expressed by a number of non-participants that the program was not relevant to them; another was lack of negotiation of session times. Costs were relatively low for both participants (who had only to give up working time) and the provider and company stakeholder.

Those farmers who did participate in the Farm Best Practice program reported some positive outcomes including increased productivity and profitability. Whilst there were positive outcomes from the program for participants, they were not as extensive or as frequent as for the other two programs for practicing farmers, where outcomes included establishment of support networks and an incentive to go on to further study, among others. The sponsoring company's withdrawal of support from the program is an indication that it did not experience worthwhile outcomes. Facilitators and the program provider were not able to point to major success flowing from the program. Consequently it is rated as poor in terms of outcomes for the provider/stakeholder group.

CERTIFICATE IN FOOD PROCESSING (DAIRY) FOR LONG TERM UNEMPLOYED

Background

This AQF level 1 course was developed by the Food Industry Training Board and runs in the workplace at a number of sites in Tasmania. It replaces various informal 'induction' programs run by individual food processing companies prior to the introduction of the NTRA. This case study describes one particular offering of the certificate for long term unemployed people in Burnie in 1995.

This program addresses a common skill deficiency in rural areas: a lack of suitably trained casual workers for seasonal tasks. In this case the seasonal demand was for cheese process workers, however, similar seasonal demands occur in other food processing sectors, in agriculture (for example, at harvest), in forestry and in the fishing and aquaculture industries. Many rural areas have a stable population so that workers, once trained, are available for seasonal work on a year to year basis.

This case study is an example of employers, an industry training board, the Commonwealth Employment Service (CES) and a TAFE Institute in a regional centre working collaboratively to solve a local skills shortage.

Two major dairy food processors in the area identified a need for suitably trained people to employ on a casual, seasonal basis. The CES, the Food Industry Training Board and the two companies collaborated to design a JobTrain program which met the requirements for funding under the 'Job Compact' aspect of Working Nation, and provided the entry level training needed for casual workers at the two companies. Previously, the companies had independently provided limited on-the-job training for seasonal workers.

TheFood Processing Certificate curriculum includes generic competencies of communication skills, occupational health and safety, hygiene and calculations as well as industry-specific skills such as packaging. Industry-specific course content was selected by the food processing companies and the Industry Training Board from components of the broad national Certificate in Food Processing curriculum for the dairy industry. One of the features of the delivery for this group of seasonal workers was the separation of the curriculum into on- and off-the-job components. Normally the whole course would be delivered on-the-job.

The Commonwealth Employment Service at Burnie called for tenders for delivery of the program. The North West Institute of TAFE was the successful tenderer. On-the-job components of the course were taught in the factory of one of the two companies.

Applicants for the course were selected from those who met the long term unemployment requirement for JobTrain courses. The selection panel included

representatives from the two companies as well as CES staff. Twenty students started the course. Company staff sat in on a number of sessions at the TAFE Institute, and Institute staff provided information to the companies on the students' performance.

Methodology

Interviews were held with a group of four participants who were working at one of the companies, and with two working at the other company. Representatives of the two companies, the Food Industry Training Board, the CES and the TAFE Institute were also interviewed. All those approached agreed to be interviewed.

Program outcomes

Thirteen of the fifteen students who completed the course were employed by the two companies on completion of the course (on a casual basis). Company management report they are very pleased with the new employees and intend to offer permanent positions to some.

Access

Since the course was specifically targeted at the long term unemployed, it could be expected that most participants would find out about the course through the CES. However, as for the other programs examined in this report, social contacts were important in making the decision to enrol. In one case, social contact was also the initial source of information.

> I've heard about this because one of my mates got into it before me, and he was telling me all about it, and I thought it sounded alright, so I got into it. (Certificate of Food Processing participant)

Most participants cited an improved chance of a job as a major factor in deciding to go ahead with the course. The fact the course was free to participants and that the location was in their regional town were other influencing factors.

> As soon as they [CES] told me you probably had a guarantee that you could get a job I was probably away [decided to participate]. (Certificate of Food Processing participant)

One placed the chance to obtain a qualification, and possible stable work ahead of an offer of short term employment:

> Cause I actually forfeited about six weeks work to do it. ... The first day I was on the course we came down here to Lactos pick up some gear ... and one of the ladies came and said "What are you doing here," she said "I've just been ringing your place to get you to come to work." (Certificate of Food Processing participant)

> Well obviously to complete a course like that and to pass in all the subjects, obviously it is ... good for self esteem, good to actually know that you have done something instead of sitting around and doing nothing. (Certificate of Food Processing participant)

Delivery

On-the-job training for those not employed by the company providing the on-the-job training site is a feature of this program. Absence of suitable specialised simulation training facilities for off-the-job training is a common resource deficiency in rural areas.

Employers found the opportunity to observe potential employees in both on- and off-the-job training situations was an advantage in selecting employees:

> Once they had done this course then when they were employed they knew exactly what was wanted, so the likelihood of them staying on and being suitable for the job was higher. (Certificate of Food Processing employer)

> Through the on-the-job training portion of the course we could actually get some insight into prospective employees and how they were performing. The off-the-job training actually also gave us a bit of insight into the different participants and their commitment, their initiative their drive, and so on, which was fairly valuable. (Certificate of Food Processing employer)

A good working relationship between the stakeholders in the course (the employers the CES and the TAFE Institute) meant that problems with delivery could be sorted out:

> I actually went back to the CES and told them I had problems with the course because [of] not enough time to learn something and they when back and assessed the issue, and obviously had a talk to the teachers. I wasn't the only in the class who had that same problem, there was probably half of them had the same problem, ... and CES were pretty good. They acted on it and tried to sort things out. (Certificate of Food Processing participant)

The TAFE Institute's own student reaction evaluation of the subjects identified a the need for some relatively minor resequencing of parts of the course and reallocation of time between modules.

Use of skills and knowledge from the course

Employers were involved in selecting the elective modules taught, and were happy with the resulting content of the course. The skills and knowledge taught on the course fitted their work practices:

> They do [use skills and knowledge learnt on the course], in particular relation to hygiene. Safety certainly, they are getting involved in passive identification and so on throughout the work place. (Certificate of Food Processing employer)

The participants also reported that they used skills and knowledge relating to safety and hygiene in the workplace. One focus group found the calculations learnt of the job were the most useful thing about the Certificate course. Calculations are used to work out the number of cheeses which can be loaded onto a pallet.

Overall, the course improved confidence to participate in work amongst a group of long term unemployed, as this participant summarises:

> Having that work experience gave me the confidence. It made it easy to fit when we came. We knew where to go, you knew what to do. (Certificate of Food Processing participant)

Overall, employers were very satisfied with the course, compared to the previous on-the-job training provided to seasonal workers. They also liked the 'quality assurance' of the certification which the participants received.

> [The course] is very structured. ... It gives them a greater understanding before they come into the workplace, which I think is good. (Certificate of Food Processing employer)

> [The Certificate] demonstrates to us that they have actually obtained the particular standard in their knowledge and competencies for the food industry. (Certificate of Food Processing employer)

Other benefits for participants

Some of the participants gained the confidence to go one to further study, following success in this AQF level 1 course:

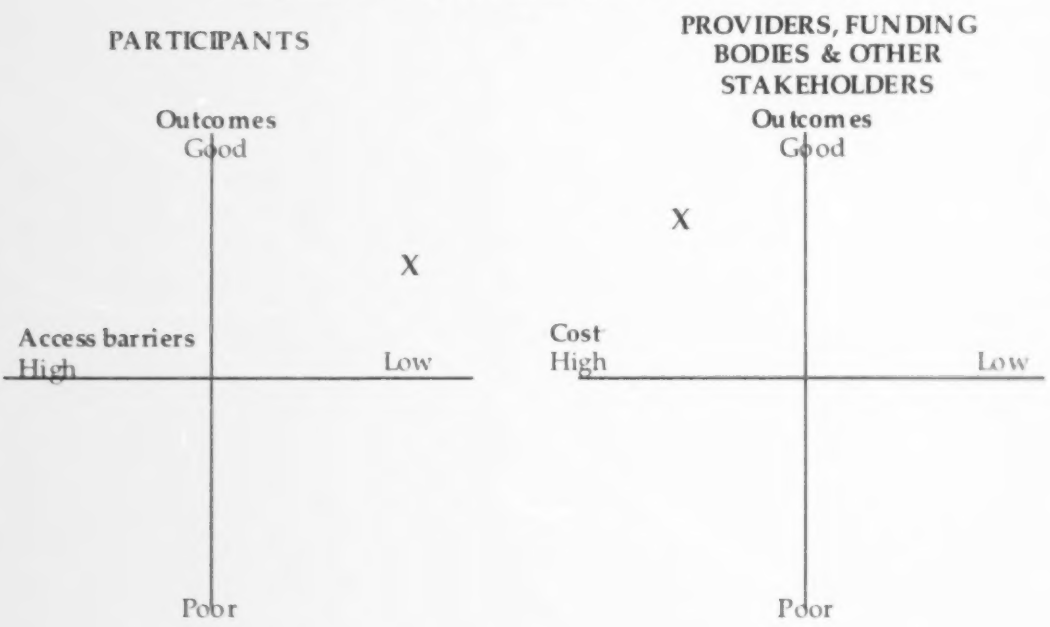
> I'm thinking of going back to TAFE at night and doing a computer diploma, associate diploma. ... What [the Food Processing Certificate course] did for me was that it gave me more confidence in myself, because I got a job. ... I think it gave me back a lot of my confidence and self esteem. (Certificate of Food Processing participant)

> They were going to pay someone from Lactos to go over there [a cheese making course in Victoria]. I put my name down for that. (Certificate of Food Processing participant)

Cost effectiveness grid

Note: This is an attempt to synthesise all the data obtained about the program. The grid should next be tested on program participants, providers and other stakeholders.

Certificate of Food Processing cost effectiveness grid



The previously long term unemployed participants in this program had relatively low access barriers. There was no cost to the participants, and they were encouraged by the Commonwealth Employment Service (CES) to join the program. The likelihood of a job at the end of the training increased the motivation of participants and was a counter to any lack of confidence in their ability in a training situation. The stakeholders (the CES, employers and Food Industry Training Board) had relatively high costs because they spent a large amount of staff time developing the program and selecting participants. The funding body had to pay the entire cost of the training.

Outcomes were good for both groups. The providers and other stakeholders are shown has having slightly higher outcomes than the participant group. The employers were very pleased with the pool of qualified labour which they had available. The CES, Industry Training Board and course provider were all satisfied that their objectives had been met. While those participants who had obtained regular or permanent employment had very high outcomes, there were some participants who had only limited casual work, or in a few cases no work following the program. Most participants reported improved self esteem and/or willingness to go on to further education or training.

FISH FARM ATTENDANT (FIN FISH)TRAINEESHIP

Background

This entry level AQF level 2 course was offered in Tasmania for the first time in 1995-96. It is run by the Fishing Industry Training Board after being developed on behalf of the Board by Distance Education Services at the University of Tasmania. An industry Working Group closely directed the curriculum design process. The traineeship is the first formal course developed for fish farm workers below university level.

The curriculum design process involved extensive consultation with salmonoid industry representatives and visits to fish farms around the state. All modules were either specifically written for this traineeship, or in the case of the generic modules, were customised to reflect industry practices. A feature of the curriculum is the inclusion of a number of licenses, tickets and other certificates within it, for example a diving certificate (for diving off fish farm pontoons), a forklift driver's license and a limited coxswain's ticket. Like in the Certificate in Food Processing, there are generic competencies in the curriculum.

Whilst this the initial offering of this certificate is at AQF level 2, the Fishing Industry Training Board is considering upgrading it to level 3 in the future (Byrne, 1995, pers. comm.). The National Training Board (1992) descriptors suggest that a level 3 certificate may be more appropriate; fin fish farm attendants usually work under limited supervision (level 3) rather than routine supervision (level 2) and require a broad range of skills (level 3).

A variety of training providers

The Fishing Industry Training Board has contacted out the teaching of components of the course to a number of different training providers. Hobart College (a Department of Education, Community and Cultural Development senior secondary college) teaches calculations, communications and information processing modules, the Australian Maritime College teaches small boat handling and safety, the University of Tasmania teaches aquaculture modules, a private diving instructor teaches diving and the ITAB itself teaches hydraulic systems and coxswain skills. The traineeship is delivered by a combination of block release and on-the-job training. Trainees travel to seven different sites for blocks, each being the site of the provider of the module of that block. On-the-job assessment is carried out by the manager of the fish farm where the trainee is employed. A (waterproof) training record book is used to record competencies achieved both on- and off-the-job.

The innovative delivery method which uses a large number of providers according to their expertise makes best possible use of available expertise and specialised training resources. Carmichael (1992) recommends the development of such "closely linked networks of Senior Colleges, TAFE Colleges and private

and community providers of off-the-job education and training" (p. viii). This is particularly important in an industry such as aquaculture where many of the resources needed for training, such as boats, fire fighting equipment, diving equipment and forklift trucks are costly.

Students were given RPL for some of the modules, based on evidence of certificates and other qualifications, such as forklift operator licences and diving certificates.

Unions and wages

Unions were involved in the establishment of the traineeship. Trainees were paid a flat rate whether they were training off-the-job, or at work. The wage was calculated by taking the number of training days off the working year, and dividing the total wage for the working days over the whole year. Some employers paid more than the minimum negotiated rate, particularly to employees who had been working in the industry for some time. Students who gained RPL and need less time for off-the-job training received a higher wage, as this employer describes:

> They are getting paid full time rate less the off-the-job component just re-divided by the full amount of working days, so they're on a salary about, well in this case he [the trainee] had recognition of prior learning, so I think he was about eight weeks pay down for the year. (Fish Farm employer)

Participant profile

Although the traineeship was designed with both existing workers and new entrants to the industry in mind, all but one of the first intake of eleven trainees were already working on fish farms. They ranged in age from 18 to 30 years. Because of their work experience, all but one student obtained RPL for one or more modules, with one student obtaining RPL for six of the sixteen modules.

Methodology

Interviews were conducted with the trainees as a group during the last block of the course, two employers, three facilitators, and three stakeholders, including those from the Fishing Industry Training Board and a representative of the committee which oversaw the development of the Traineeship. All those approached agreed to be interviewed.

Program effectiveness

Access

Participants were encouraged by their employers to join the program. The participants were prepared to accept lower wages in return for training. They gave

job security and a desire to know more about fish farming, especially why things were done as they were, as their reasons for enrolling.

Recognition of prior learning

Granting RPL for existing qualifications or other evidence of formal study was judged successful by students, employers and the other stakeholders:

> I thought that [RPL] worked well. I thought that was one of the things we were able to give them that a lot of the TAFE colleges don't and have difficulty with. And we only give them RPL under pretty strict conditions.... we decided the criteria as a group and if they met that criteria they were given it, and they could appeal against it. (Fish Farm stakeholder)

> [RPL was good] because I think he lost less wages, but certainly from our point of view ... it would be pointless us having him off work to do things he could already do. (Fish Farm employer]

Delivery

Generalist instructors and industry knowledge

Course instructors from areas outside the industry would like to improve their knowledge of how the skills they teach are applied in the industry. Although Hobart College had been teaching AQF level 1 vocational programs, the Fish Farm Traineeship was its first program as a private training provider. The school provided training for its staff, but commented that this required a resource commitment:

> ... our main problem is that we're doing it at our own expense and at the moment that's fairly resource hungry. I'm going off to do this at three hundred dollars a throw. ... The fellow who was doing the fin fish delivery, we put him through a week out of here, paid his salary, paid someone else to take his place and put him on a fish farm for a week so that he could gain some knowledge about the fish farm operation. (Fish Farm training provider, Hobart College)

> I think if these courses were to continue it would be a good idea to actually go down and do some observation of the work that these people do in the aquaculture industry, particularly around nets and pens ... to see what they get up to in the small boats and the type of safety gear that they do wear... (Fin Fish instructor)

Participants on delivery

The group of students were happy with the program delivery. The only criticism of the multiple sites was not being able to find the training room on one occasion, and one late notification of time.

Facilitators/trainers were judged satisfactory by the students, with only two exceptions, one because of a lack of industry-specific knowledge, and another because the module had not been tailored specifically for the group:

> We were being taught by two people, they were good in there own right, but we couldn't expect them to have an awful lot of working knowledge. He only found out a week before hand that they got the contract. (Fish Farm participant)

> Basically fork lift driving, some of the units were too long. I think if you keep with the fact that the curriculum course was designed for people straight out of school... I was happy with it anyway. (Fish Farm participant)

Participant interaction

As in the other case study programs, participants valued the opportunity for interaction:

> What has been good is that we have got people from 4 different farms here in a building, and in the evening, you can do so much reading and studying during the day when you are in class, ...but you sit down in the afternoon or in the evening and just swap ideas, basic ideas... (Fish Farm participant)

More confidence

Participants said that the course had given them confidence in doing the 'right thing' on the job because of a better understanding of why things were done:

> Basically what it has done is open doors. Its pointed doors to go to and it is somewhere you can open those doors and use them as we need. Like if you want to know about fish stress or feeds you know who to talk too, you have a basic knowledge and you go on from there. (Fish Farm participant)

Changes on fish farms

Employers found that employees were able to use knowledge and skills from the course and suggest changes to work practices:

> Both of them [my employees] have [suggested changes to work practices because of the course]. ... I think they have been taken seriously. I think probably more so from the long term employee whose gone and done it and who knows the routine. (Fish Farm employer)

Participants use the knowledge and skills from the course on the job:

> The information technology; I use the computer a fair bit at work now. I never did that before. Even with [fish] husbandry I do take more care. (Fish Farm participant)

Future training

Most of the group would like to do further training when the traineeship is over:

> I wouldn't mind doing something up here actually, more tertiary training ... We asked the question at the Uni what is available. What we would like is a workshop that you come up for a couple of weeks and deal with stuff like feeding, ... they could perhaps advertise it internally or between farms and say look we could organise a workshop anyone interested. (Fish Farm participant)

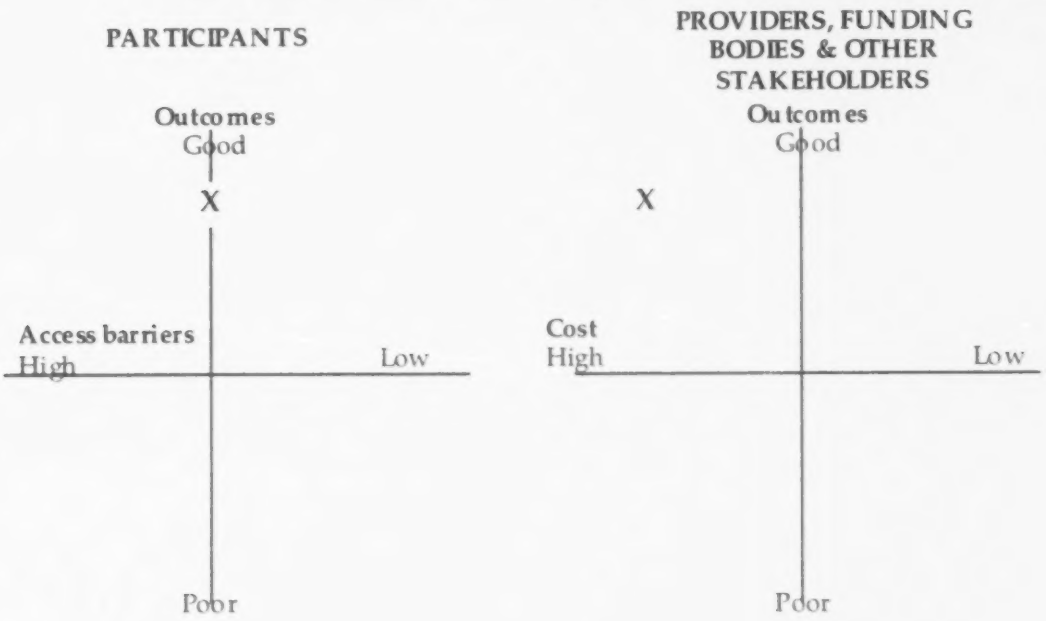
Cost issues

The Fishing ITAB pointed out that all traineeships were funded at the same rate, regardless of industry. This is a disadvantage to industries such as aquaculture, where training requires expensive resources. The resources required for aquaculture training have both a high capital cost (boats and diving equipment) and a high consumables cost. For example, it costs $80 to refill each of the fire extinguishers used in the ship board safety module and $400 to train each student in the diving module.

Cost effectiveness grid

Note: This is an attempt to synthesise all the data obtained about the program. The grid should next be tested on program participants, providers and other stakeholders.

Fish Farm Attendant Traineeship cost effectiveness grid



Access barriers for participants were neither high nor low. The trainees had to have a job in the industry, which barred access for non-employees. Trainees were also required to travel to a number of locations for their training. There were factors which countered these barriers, including a flexible wage arrangement while training, subsidised training costs and easily accessible recognition of prior learning arrangements.

The Fish Farm Attendants (Fin Fish) Traineeship is expensive to deliver because it involves costly equipment and facilities. Without the creative delivery methods adopted by the Fishing Industries Training Board, the cost would have rated at the extreme left of the axis. By choosing a variety of providers to deliver modules in their areas of expertise, the Industry Training Board reduced its costs. The well developed recognition of prior learning arrangements were costly to develop in terms of staff time, but reduced the delivery cost of the course by making sure, for example, that only those who did not have the required level of competence actually did the expensive diving module.

The grids show good outcomes for both groups. Trainees were pleased with the knowledge and skills which they had acquired, and were well satisfied with the facilitators and program format, including the use of a variety of providers. Employers were satisfied with the knowledge and skills acquired by their employees, and regarded the provision of an entry level qualification in their industry as beneficial.

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APPENDIX A
INTERVIEW CONDUCT

The interviews were conducted using the following structure.

Initial Contact

Those selected are contacted by telephone. They are told

- the interviewer is from the University of Tasmania;
- the purpose of the survey is to evaluate rural training programs;
- the project is sponsored by the Tasmanian Rural Industry Training Board;
- why they have been selected for interview (because of the course they have attended or as a name given by a TFGA Dairy Councillor);
- the time that the interview will last;
- for the three courses targeted at farmers, that they will be required to provide some brief financial details about their farm;
- their responses will be confidential;
- participation is entirely voluntary.

Further elaboration is given if requested. A suitable date and time for the interview is arranged with those who agree to participate. They are mailed an information package containing:

- a letter setting out information about the project as required by the University of Tasmania Ethics Committee;
- a letter confirming the date and time of the interview;
- a personal details and business details question form.

The interview

Individual participant interviews were conducted on the farm. Group interviews were held at the training location, or for the Certificate of Food Processing, at the workplace. Facilitator and stakeholder interviews were held at the interviewees place of employment, or in some cases by telephone. All prospective participant interviews were conducted by telephone.

Interviews are either conducted with the selected person alone, or in some cases with other family members or employers present. Others' contributions varied from the occasional confirmation of a date to substantial answers.

At the time of the interview, the interviewer collected the personal and business form, which was mailed out previously, and asks the participant if they have had any difficulty completing it. Some chose not to fill out the financial details.

The interview tapes were later transcribed and the questionnaires coded by the interviewer. The qualitative data were analysed using the NUD*IST data analysis software package.

APPENDIX B
SAMPLE INTERVIEW INSTRUMENTS

This Appendix contains a sample of the interview instruments used in the case studies. It includes one interview instrument for each of the sample groups: participants (individual and group), facilitators, employers, prospective participants and other stakeholders.

The sample instruments are:

- Participants group (Whole Farm Planning)
- Participant individual (Dairy Management)
- Facilitator (Fish Farm Traineeship)
- Employer (Food Processing)
- Prospective Participant (Farm Best Practice)
- Stakeholder (Whole Farm Planning)

Copies of other instruments are available from the author.

WHOLE FARM PLANNING GROUP EVALUATION PROFORMA

About your property
What is the *main* activity on your farm?

Section ENR : Questions about the Decision to Enrol

ENR 1
How did you find out about the Whole Farm Planning course?
Direct mail
Newspaper advertisement
Newspaper article
Radio
From previous participants
Specialist publication
Brochure or poster
From another farmer
Employer
At a farmer meeting, field day, seminar, course or discussion group}
From an extension officer or consultant or other expert} Specify
Financial institutions or advisers}
Other

ENR 2
What other people and information sources did you consult before deciding to enrol?
Newspaper
Radio
Television
Specialist publication
Brochure or poster
From previous participants
Other farmers
Family or friends,
DPIF
Your employer
A business partner
An extension officer, field officer or consultant or other expert
Farmer meeting, field day, seminar, course or discussion group
Other

ENR 3
Were there any other factors influencing your decision to enrol?
Cost
Delivery mode (eg. flexible, small group)
It was targeted to farmers in my locality
Employer
Location
Program provider's reputation
Recommendation of past participants
Program seemed relevant to my needs or situation
The time of the sessions (time of day or time of year)
Opportunity for interaction with other participants
Other

ENR 4

What was the *main* reason you decided to participate in the program?
Cost
Delivery mode (eg. flexible, small group)
It was targeted to farmers in my locality
Employer
Location
Program provider's reputation
Recommendation of past participants
Program seemed relevant to my needs or situation
The time of the sessions (time of day or time of year)
Opportunity interaction with other participants
Other

Section EXP : Questions about Expectations of the Course
EXP 1
What did you expect to get out of the course?
ie In terms of physical, financial, human & other factors.

EXP 2
Did the course match your expectations?

Section PR : Questions about the Program (ie. content, delivery, location, other)
PR 1
What did you like most?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 2
What did you like least?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 3
What could have been improved, and how?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)

Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 4
Which ideas/skills covered in the course do you now use on your farm?
Mapping of land capability
Designing water structures
Consideration of wider implications of catchment
Consideration of biodiversity issues
Using trees on farms eg agroforestry, shelter belts
Preparing a business plan
Identification of risks and development of strategies to handle them
Negotiating with financiers
Developing farm planning and implement this
Communicating objectives to other family members
Succession planning
Future planning

Section CH : Questions about Changes to Practice
CH 1
What changes have you made to your management or farm practices that have been influenced by the course?

CH 2
What else, apart from the course, influenced your decision to change?
(Provide a list of information and support sources)
Direct mail
Newspaper advertisement
Newspaper article
Radio
From previous participants
Specialist publication
Brochure or poster
From another farmer
Employer
At a farmer meeting, field day, seminar, course or discussion group}
From an extension officer or consultant or other expert} Specify
Financial institutions or advisers}
Other

CH 3
When did you start to make the change?
Before the course
During the course
Three months later
Very next season

Twelve months later
Other

Section KASA : Measure of Knowledge, Attitudes, Skills, Aspirations and Planning

KASA 1
What have you learnt during the course that you plan to use or would like to use on your farm?

KASA 2
What needs to happen before you can implement this?

KASA 3
Have you built knowledge and skills learnt at the course into the planning cycle on the farm?

Section RES : Questions about Results

RES 1
Are there any measurable financial or productivity gains which you attribute to the course?

RES 2
Has the course improved the sustainability of the farm? Please describe.

Section FUT : Questions about Future Directions

FUT 1
What additional knowledge & skills do you feel you would like to obtain?

FUT 2
Do you know of any or how to find out if there are any courses or other training that might develop the skills and knowledge you require?

DAIRY FARM MANAGEMENT PARTICIPANTS' EVALUATION PROFORMA

Section ENR : Questions about the Decision to Enrol

ENR 1
How did you find out about the Dairy Farm Management course?
Direct mail
Newspaper advertisement
Newspaper article
Radio
From previous participants
Specialist publication
Brochure or poster
From another farmer
TAFE
Employer
At a farmer meeting, field day, seminar, course or discussion group}
From an extension officer or consultant or other expert} Specify
Financial institutions or advisers}
Other

ENR 2
What other people and information sources did you consult before deciding to enrol?
Newspaper
Radio
Television
Specialist publication
Brochure or poster
From previous participants
Other farmers
Family or friends,
DPIF
TAFE
Employer
A business partner
An extension officer, field officer or consultant or other expert
Farmer meeting, field day, seminar, course or discussion group
Other

ENR 3
Did any of the following factors influence your decision to enrol?
Cost
Delivery mode (eg. flexible, small group)
It was targeted to farmers in my locality
Employer
Location
Child care provided
Women only
Program provider's reputation
Recommendation of past participants
Program seemed relevant to my needs or situation
The time of the sessions (time of day or time of year)
Opportunity for interaction with other participants
Other

ENR 4
What was the *main* reason you decided to participate in the program?
Cost
Delivery mode (eg. flexible, small group)
It was targeted to farmers in my locality
Employer
Location
Child care provided
Women only
Program provider's reputation
Recommendation of past participants
Program seemed relevant to my needs or situation
The time of the sessions (time of day or time of year)
Opportunity interaction with other participants
Other

Section EXP : Questions about Expectations of the Course

EXP 1
What did you expect to get out of the course?
ie In terms of physical, financial, human & other factors.

EXP 2
Did the course match your expectations?

(a) *If so:* **How?**
(b) *If not:* **Why not or how come?**

EXP 3
What aspects were better than you expected?

How?
ie In relation to content, delivery & location.

EXP 4
What aspects were not as good as you expected and why not?

Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Child care provided
Women only
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

Section PR : Questions about the Program (ie. content, delivery, location, other)

PR 1
What did you like most?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Child care provided
Women only
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 2
What did you like least?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Child care provided
Women only
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 3
What could have been improved, and how?
Content (breadth, depth, mix of practical and theory)
Delivery mode (eg. face-to-face, external, flexible, block release, workplace)
Program structure (eg. farm visits, practical demonstrations, lectures, discussions)
Child care provided
Women only
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Location and time of sessions
Physical learning environment
Lists of contacts
Value for money
There was no formal assessment
Other

PR 4
Which of the following ideas/skills covered in the course do you now use on your farm?

Nutrition
Feed
Stocking Rates
Irrigation
Drainage
Pasture Production
Breeding & Mating Management
Animal Health
Calf Management
Shelter
Record Keeping
Financial Management
Labour Management
Time Management
Industrial Issues

PR 5
Which of these were you using before you did the course?

Nutrition
Feed
Stocking Rates
Irrigation
Drainage
Pasture Production
Breeding & Mating Management
Animal Health
Calf Management
Shelter
Record Keeping
Financial Management
Labour Management
Time Management
Industrial Issues

Section KASA : Measure of Knowledge, Attitudes, Skills, Aspirations and Planning

KASA 1
What are the most useful or important things you have learnt from the course?
(Please prioritise from 1 to 15)

[ ] Nutrition
[ ] Feed
[ ] Stocking Rates
[ ] Irrigation
[ ] Drainage
[ ] Pasture Production
[ ] Breeding & Mating Management
[ ] Animal Health
[ ] Calf Management
[ ] Shelter
[ ] Record Keeping
[ ] Financial Management
[ ] Labour Management
[ ] Time Management
[ ] Industrial Issues

KASA 2
What have you learnt that could be used on your farm now or in the future?

Nutrition
Feed
Stocking Rates
Irrigation
Drainage
Pasture Production
Breeding & Mating Management
Animal Health
Calf Management
Shelter
Record Keeping
Financial Management
Labour Management
Time Management
Industrial Issues

KASA 3
Do you feel confident enough to implement what you have learnt?

(a) *If so:* **What aspects of the course helped to boost your confidence?**
(b) *If not:* **What do you think you need to do now to be confident enough to implement what you have learnt?**

KASA 4
What (other) barriers are there that might prevent you from implementing what you have learnt?
Lack of support from experts
Need to do other things first
Wrong time of year
Lack of support from family
Too costly
Need more information
Need extra skills
Others

KASA 5
What benefits do you anticipate from implementing what you have learnt?
Increased profit
Increased milk & butter fat yield
Improved quality
Increased stocking capacity
Time efficient
Better risk management
New markets
Sustainability
Other

KASA 6
What things have you learnt during the course that you plan to use on your farm?

KASA 7
When confronted with a problem about the following, do you:
[A] Figure it out within the family
[B] Ask neighbours and close friends if they have had the problem, and what their solution was
[C] Ask a relevant expert for advice
[D] Not involved in solving the problem

[ ] Nutrition
[ ] Feed
[ ] Stocking Rates
[ ] Irrigation
[ ] Drainage
[ ] Pasture Production
[ ] Breeding & Mating Management
[ ] Animal Health
[ ] Calf Management
[ ] Shelter
[ ] Record Keeping
[ ] Financial Management
[ ] Labour Management
[ ] Time Management
[ ] Industrial Issues

KASA 8
How much time is set aside for office work?
I don't spend any time on it
One hour per week
One day a month, etc.

KASA 9
Has the course made you **[A] no more aware of:**
[B] somewhat more aware of:
[C] much more aware of:

[ ] Nutrition
[ ] Feed
[ ] Stocking Rates
[ ] Irrigation
[ ] Drainage
[ ] Pasture Production
[ ] Breeding & Mating Management
[ ] Animal Health
[ ] Calf Management
[ ] Shelter
[ ] Record Keeping
[ ] Financial Management
[ ] Labour Management
[ ] Time Management
[ ] Industrial Issues

KASA 10
Have knowledge and skills learnt at the course been built into the planning cycle on the farm?

(a) *If so:* **How and when?**
(b) *If not:* **Why?**
I don't have a planning cycle
The program knowledge and skills are not relevant to my situation
I have no influence over the planning cycle
I need more information (specify what)
I need additional skills (specify what)
I don't feel confident enough

Section CH : Questions about Changes to Practice

CH 1
What changes have been made to management of your farm or farm practices that have been influenced by you doing the course?

NB: If nil changes then go to FUT section

If there have been changes as a result of the course
CH 2
How would you rate each change in terms of the long term viability and profitability of the farm business?
Please rate the change as either critical (1); very important (2); of some importance (3); not very important (4); or failed (5).

Name or description of the change made	Importance to long term viability & profitability (rate change from 1 - 5 using above code)

CH 3 (For each change identified)
Did you become aware of the new practice at the course?

If not, how did you first become aware of it?
Direct mail
Newspaper advertisement
Newspaper article
Radio
From previous participants
Specialist publication
TAFE
Brochure or poster
From another farmer
Employer
At a farmer meeting, field day, seminar, course or discussion group}
From an extension officer or consultant or other expert} Specify
Financial institutions or advisers}
Other

CH 4
What else, apart from the course, influenced the decision to change?
(Provide a list of information and support sources)
Direct mail
Newspaper advertisement
Newspaper article
Radio
From previous participants
Specialist publication
Brochure or poster
From another farmer
Employer
At a farmer meeting, field day, seminar, course or discussion group}
From an extension officer or consultant or other expert} Specify
Financial institutions or advisers}
Other

CH 5
When was the change begun?
Before the course
During the course
Three months later
Very next season
Twelve months later
Other

Section RES : Questions about Results

RES 1
Are there any measurable financial or productivity gains which you attribute to the course?

RES 2
Has the course improved the sustainability of the farm? Please describe.

RES 3
Were there other outcomes of the course for you or the farming business?

Section REF : Reflection Questions

REF 1
What worked well or better than expected as the change was made?

REF 2
How was knowledge & skills you learnt at the course used when making the change?

REF 3
What didn't work or didn't go as well as expected?

REF 4
How were these obstacles overcome?

REF 5
Why was the change made the way it was?

REF 6
Did you think about doing it differently as a result of what you heard on the course?

REF 7
Now that the following have been tried:

Nutrition
Feed
Stocking Rates
Irrigation
Drainage
Pasture Production
Breeding & Mating Management
Animal Health
Calf Management
Shelter
Record Keeping
Financial Management
Labour Management
Time Management
Industrial Issues

can you suggest improvements to these topics covered in the Dairy Farm Management course and/or to their presentation?

Section FUT : Questions about Future Directions

FUT 1
What goals and objectives do you have for the farm business?

FUT 2
What additional knowledge & skills do you need to acquire these?

FUT 3
Do you know of any or how to find out if there are any courses or other training that might develop the skills and knowledge you require?

To enable comparison of participants in this course and across programs we need some details about you and the property that you work on. This information will be kept confidential. Please do not put your name on the form.

About You

1 What is your gender? Male [ ] Female [ ]

2 In what age group are you?

Under 25	[ ]
25 - 35	[ ]
36 - 45	[ ]
46 - 55	[ ]
Over 55	[ ]

3 What is your highest education qualification?

Completed Primary	[ ]
Completed Year 9	[ ]
Completed Year 10	[ ]
Completed HSC	[ ]
TAFE Qualification	[ ]
University Qualification	[ ]

4 Do you come under any of these categories?

Aboriginal / Torres Strait Islander	[ ]
Born Overseas	[ ]
Speaks a language other than English at home	[ ]
Doesn't speak English well	[ ]
Sole supporting parent	[ ]
Have a disability	[ ]
Poor literacy skills	[ ]

5 How long have you been a farmer or worked in agriculture?

____ years ____ months

6 How long have you worked on the property where you are now?

____ years ____ months

7 Are you involved in making management decisions on the farm?

Yes [ ] No [ ]

Participation in supplying the following information would be greatly appreciated but is entirely voluntary.

About your property

1 Apart from dairying, are there any other activities on the farm?

Broadacre [ ]
Vegetable [ ]
Beef Cattle [ ]
Sheep [ ]
Dairy Cattle [ ]
Fruit Growing [ ]
Other [ ] please specify _____

2 How many hectares / acres do you manage?

_____ hectares _____ acres

3 How many other people work on the farm permanently? (not including casual/seasonal labour or contractors) _____

4 What was your most recent gross operating surplus? ie Farm Business Income less Farm Operating Expenses (including rates & land taxes but not income taxes or interest payments).

Loss [ ]
0 - $19 999 [ ]
$20 000 - $49 999 [ ]
$50 000 - $99 999 [ ]
$100 000 + [ ]

5 We would like to get a picture of whether farm business incomes of whole farm planning participants are increasing, stable or declining. In comparison to the 3 previous years, is this amount:

	1 Year ago	2 Years ago	3 Years ago
More than $20 000 less			
$10 000 - $20 000 less			
$3 000 - $10 000 less			
About the same (+/-$3000)			
$3 000 - $10 000 more			
$10 000 - $20 000 more			
More than $20 000			

6 What factors (if any) do you think affected these figures?

Fish Farm Traineeship Facilitators

Section EXP: Questions about Expectations

EX 1
Do the participants in this program match your expectations in relation to the following criteria?

Learning ability
Interest in course
Background
Work experience
Knowledge of the area
Understanding of content
Other (please specify)

Section PRC: Questions about Program Content

PRC 1
Is the content relevant for the participants?

If not: How should the content be improved?

PRC 2
Are there areas that are covered in too much detail?

PRC 3
Are there areas that are not covered in enough detail?

PRC 4
Is the degree of difficulty in the program appropriate for the participants?

PRC 5
Is the mix of practical and theory appropriate?

If not: **Explain.**

Section PRD: Questions on Program Delivery Method

PRD 1
Which aspects of the program were well received? Why?

PRD 2
Which aspects of the program were not well received? Why?

PRD 3
What would you change about the program delivery?

Presentation style
Group discussions

Participant interaction
Number or length of sessions
Field trips
Specialist guest instructors

PRD 4
How would you rate the interaction between participants?

PRD 5
Is the way the program is delivered suitable for all participants?

If not: **What would you change in the way the program is delivered?**

PRD 6
How well does the training received off-the-job complement the training participants receive at work?

Section PRR: Questions about Program Resources

PRR 1
Are there materials provided to the participants?

PRR 2
What do you like about the materials?

PRR 3
What don't you like about the materials?

PRR 4
Are the materials suitable for all the participants?

If not:: **Explain**

PRR 5
How could the materials be improved?

PRR 6
Are sufficient and appropriate resources (including time) available for course preparation and delivery?

Section PRA: Questions about Program Assessment

PRA 1
How do participants assess their progress?

PRA 2
Is the assessment method appropriate?

PRA 3
Do you discuss the participants' progress with their employer?

PRA 4
Do the participants' results match your expectations?

Section KASA : Questions about Knowledge, Attitudes, Skills, Aspirations and Planning

KASA 1
Were the learning objectives and expected outcomes achieved?

Section CH : Questions about Changes to Practice

CH 1
Are you aware of any changes to practice by past or present participants that are attributable to the course? If so, please describe.

Section GEN : General questions about the program

GEN 1
Are there improvements you could suggest that would make the program more effective?

GEN 2
How would you rate the usefulness of the program to the client group?

To enable comparison of facilitators in this course and across programs we need some details about you. This information will be kept confidential. Please do not put your name on the form.

1 How long have you been teaching in this program?

2 How long have you been teaching in this area?

3 Are there additional skills which you could acquire which would improve your teaching or facilitation or delivery of this course?

4 In what age group are you?

Under 25 years	[ ]
25 - 35 years	[ ]
36 - 45 years	[ ]
46 - 55 years	[ ]
Over 55 years	[ ]

5 What is your gender? Male [ ] Female [ ]

Certificate of Food Processing Course

Employer Questions

Section ENR : Questions about the decision for employees to enrol

ENR 1
How did you find out about the course?

ENR 2
What other people and information sources did you consult before becoming involved in the course?

ENR 3
Why did you decide to go with the course?

incentives from CES
shortage of suitable people for seasonal work
shortage of suitable people for permenent staff

Section EXP : Questions about Expectations

EXP 1
What did you expect your prospective employees to get out of the program?
(Need to consider specific program aims for the response categories for this section.)

Savings in time, effort, handling of materials
General improvements in method of operation
Improvement in facilities
Improved tools or equipment
Eliminating waste materials
Improved product quality
Increased profit
Increase production
Labour savings
Sharing of ideas
Access to advice
Improved confidence or self-esteem
Improved environmental outcomes
Information about new technology or practices
A better understanding of .....(concept/practice)
New skills [could be specified]
Formal certification recognising skills
Other

EXP 2
Did the course match your expectations?

If so, in what ways, e.g., did the program produce the type of people qualified in areas you wanted?

If not, why not.

Section PR : Questions about the Program

PR 1
What has your employee learnt that could be used in the factory?

PR 2
What aspect, ideas, or practices were different to those employed by you?

PR 3
Were there areas of the program that you felt were not covered well or in enough detail?

PR4
How does pre-employment training compare with training during employment?
(Please explain the different training methods (if any) and compare the two methods)
cf
1) training for seasonal workers

2) training for permanent workers

PR 5
Was the length of the course suitable?

PR 6
Did you use feedback/reports from the program leader and facilitators to guide you in selecting suitable applicants?

PR 8
What could have been improved, and how?
(Consider program-specific questions in relation to content, delivery, location etc.)

Content
Delivery mode
Program structure
Program materials
Instructors/facilitators
Sharing ideas with fellow participants
Negotiation of content, structure and/or delivery mode
Location and time of sessions
Physical learning environment
Support services
Value for money
Assessment
Workplace training/supervision
Consistency of workplace and course skills and practices
Other

Section CH : Questions about Change to Practice

CH 1

Do employees use ideas/methods learnt during the course in job practices?

Section FUT : Questions about Future Directions

FUT 1

Do you have any plans to employ a similar form of training in the future?

Questions about the people in management

1. Your position in management is

2. Size of your workforce
   a) seasonal (relates only to workers in this field)
   b) permenent

3. Do you wish either your company or youself to be identified in any report on this study?

Farm Best Practice

FBP Prospective Participants

Questions for Prospective Participants

Section PP : Questions for Prospective Participants

PP 1
What programs have you done in relation to farming

PP 2
Are you aware of any programs in the area of farming

Please list which ones.

PP 3
Have you ever heard of the Farm Best Practice Program

PP 4
Where did you hear about the Farm Best Practice Program

PP 5
Have you considered doing the Farm Best Practice Program

PP 6
If answer to PP 5 is 'no' ask
Why have you not considered doing the Farm Best Practice Program

Cost
Time of sessions
Needed on the farm
Location
Course not relevant
Other

If answer to PP 5 is 'yes' ask
Why did you decide not to attend?

Cost
Time of sessions
Needed on the farm
Location
Course not relevant
Other

PP 7
Are there any other programs that you intend to take or would like to see offered in this area?

PP 8

Do you know of any courses or other training that might help achieve those goals and objectives?

To enable comparison of participants in this course and across programs we need some details about you and the property that you work on. This information will be kept confidential. Please do not put your name on the form.

1 What is your gender? Male [ ] Female [ ]

2 In what age group are you?

Under 25	[ ]
25 - 35	[ ]
36 - 45	[ ]
46 - 55	[ ]
over 55	[ ]

3 What is your highest education qualification?

Completed Primary	[ ]
Completed Year 9	[ ]
Completed Year 10	[ ]
Completed HSC	[ ]
TAFE Qualification	[ ]
University Qualificatiion	[ ]

5 How long have you been a farmer?

_____ years _____ months

6 How long have you worked on the property where you are now?

_____ years _____ months

7 What is the *main* activity on the farm?

Broadacre	[ ]
Vegetable	[ ]
Beef Cattle	[ ]
Sheep	[ ]
Dairy Cattle	[ ]
Fruit Growing	[ ]
Other	[ ] please specify _____

8 What size is the property where you work?

_____ hectares _____ acres

WHOLE FARM PLANNING STAKEHOLDERS EVALUATION PROFORMA

Section PR : Questions about the Program

PR 1
Is the content of the whole farm planning course suitable?

PR 2
Is the delivery of the program satisfactory?

PR 3
Are the resources available for the program sufficient and appropriate?

PR 4
Do you believe that the program is attracting the target group?

If not: **Why not?**

Section RES : Questions about Results

RES 1
What do you see as the benefits of the program?

RES 2
Is the program meeting its objectives and expected outcomes? ie long term resource management (physical, financial & human) to improve sustainability in agriculture.

(a) *If so:* **How?**

(b) *If not:* **Why & what improvements can you suggest?**